Engin. Lib.

INDEX TO VOL. CLXXI

The **Principal Headings** with their **page numbers** are as follows:—

Aeronautics, V
Air Raid Precautions, V
Annual Review, V
American Engineering News, V
Associations, Institutions, and Societies, V
Boilers, VI
Bridges, VI
British Standards Institution, VI
Canals, VI
Coal, Coke and Collieries, VI
Concrete, VI
Dams, VI
Docks and Harbours, VII
Electrical Matters, VII
Engines, VII
Exhibitions, VII
Furnaces, VII
Hydro-Electric Power, VII
Iron and Steel, VII
Leading Articles, VIII
Letters to the Editor, VIII
Literature, VIII
L.P.T.B., VIII
Machine Tools, VIII
Maps, VIII
Mines, VIII
Motor-Cars, VIII
Obituary, VIII
Pumps, IX
Railways, IX
Railway Locomotive Matters, IX
Roads and Highways, IX
Seven-Day Journal, XI
Ships and Shipbuilding, IX
Sixty Years Ago, X
South African Engineering Notes, X
Supplements, X
Technical Reports, X
THE METALLURGIST, XII
Tunnels, XI
Water Supply, XI
Welding, XI
Wireless, XI

Names

A

ALEXANDRETTA Harbour, (360)
Allen, W. H., Sons and Co., Ltd., Unusual Pump Test Experience, 95
Alley and MacLellan, Ltd., Gardner Self-cleaning Strainer, 198
Allis-Chalmers Manufacturing Co., The Gas-Turbine Locomotive, 105; Tank-Tractors for Sewage Sludge, 232
Aluminum Co. of America, The Need for Aluminium, (9)
"Americam" United States Liner, 16 (*Supplement, January 3rd*, 1941), (392)
American Car and Foundry Co., Hopper-cars for Cement Transport, (234)
American Rolling Mill Co., Big Magnets, (106)
Andamite, Ltd., "Raidsafe" Shelters, (275)
Anderson, Sir K., "The Seeds of War," (138)
Anderson Locomotive Spark Arrester, (376)
Andrade, E. N. da C., The Mechanical Behaviour of Solids (Forrest Lecture), 294, 380, 394
Appleyard, K. C., Appointed Director of Emergency Construction, 107
Arc Manufacturing Co., Ltd., Flash Butt Welder, 281
Archibald, R. D., Propaganda by Boasting, 98
Arkansas Power and Light Co., "Sour Gas," (360)
Armstrong, H. E., Memorial Lecture, 89
Asplund and Holst, "Defibrator" Method of Alcohol from Wood, (106)
Associated Portland Cement Manufacturers, Ltd., Annual Meeting, 251
Atlantic Refining Co., All-welded Tanker "E. H. Blum," (344)
Austin, H. G., Roumanian Oil Output, (88)
Austin, Lord, Obituary, 353
Australian Aeronautical Research Laboratory, 280
Avery, W. and T., Ltd., Improved Dynamic Balancing Machine, 199
Az-New File Co., Renovating Used Files, (166)

B

BALDWIN Locomotive Works, New 4–6–6–4 Locomotives for West Maryland Railway, (186); "M-3" Combat Tank, (424)
Ball, J. D. W., Stresses in Riveted Joints, 100
Baltimore Airport, All-welded Hangar, (250)
Barnes, L. J., Peace Aims, 148
Barston Works, Solihull, Treatment of Sewage, 180
Bartlett, F. C., Fatigue Following Highly Skilled Work, 373
Bausch and Lomb Brinell Microscope, A. C. Wickman, Ltd., 153
Bausch and Lomb Optical Protractor, A. C. Wickman, Ltd., 152
Beaverbrook, Lord, British Aircraft Production, 203
Bell "Airacobra" Pursuit Plane, 9
Benjamin Electric, Ltd., Sound-spotting Scheme, 184
Benkert, M., Peace Aims, 132
Benn, Ernest, Peace Aims, 131; The Political Method, (193)
Berlin Air Raid Damage, 215
Bernal, J. D., The Physics of Air Raids, 262
Bertram, C., Obituary, (106)
Beyer, Peacock and Co., Ltd., Beyer-Garratt Locomotives, (360)
Bidwell, P. W., Metal in Aeroplanes, (88)
Binnie, A. M., and H. B. Squire, Liquid Jets of Annular Cross Section, 236
Binnie, W. J. E., Adventures of an Engineer, 317
Birsfelden, near Basle, Rhine Port, (72)
Blackburn "Botha" Torpedo Bomber, 84
Blohm and Voss Shipyard, R.A.F. Targets in Germany, 385
Boeing Flying Boats, (376)
Boeing "Flying Fortress" Super-bomber, 9
"Bonaventure," H.M. Cruiser, Loss of, 251
Boot, J., Re-elected President, Institution of Railway Signal Engineers, (250)
Booth, C. F., The Application and Use of Quartz Crystals in Telecommunications, (88)
Bosman, V., Technology in South Africa, (72)
Boston-Washington Super-highway, (328)
Boston Wove Hose and Rubber Co., Large Flexible Hose, (20)
Bottomley, W. T., The Design of Condensing Plant and Cooling Water Systems, 404, 418; (Leading Article, 400)
Boucher, P. L., Straining of Water and Sewage, 322
Boulton and Watt Steam Pumping Engines for Scrap, 57, (138); (Letter, 66)
Bowling, R. T., A Wood-briquetting Machine, 182
Box Butte Dam, Nebraska, (154)
Boyer, R. S., Patent Boiler, 77
"Bradleyite," New Mineral, (415)
Brassert, H. A., and Co., Ltd., Output of the Goring Steel Works, 66
"Bremen," North German Lloyd Liner, Fire, 187
Bremerhaven and Bremen, R.A.F. Targets in Germany, 179, 223, 262
Bremner, D. A., The Mobilisation of Industry for the Purposes of War, 22; (Leading Article, 30)
Brenner Railway, 94
Brisbane Aerodrome, (56)
British Airways, Ltd., New Flying Boats, (408)
British American Oil Co., Ltd., Lubricating Oil Plant in Canada, (296)
British Commercial Gas Association, Gas Filling Stations for Motor Transport, (12)
British Nylon Spinners, Ltd., New Works, (234)
British Overseas Airways, New Aircraft, (138)
British Ropes, Ltd., "Rope Talks," (408)
British Thomson-Houston Co., Ltd., Switchgear of 1940, 27; Automatic Voltage Regulators, 50; Mercury Arc Rectifiers, 50; Ilgner Winder Equipment for South Africa, 51; Heating Equipment, 61; Trolleybus Motors, 67; Efficiency Measurements of Rectifier Equipment, J. C. Read, 142, (180); 80-Watt Fluorescent Lamp, 230; Retirement of Mr. F. Samuelson, 345
British Timken, Ltd., Delivery of Bearings, (311); Works Surgery and Cleansing Station, 397
Brown, David, Tractors, Ltd., Farm Implement Control, 33
Brown, E. O. Forster, Obituary, 354
Brown, F. E., Obituary, 211
Brown, James, Obituary, 65
Bruce Peebles and Co., Ltd., Electrical Equipment of 1940, 17
Bruce, Robert, Alexander Morton and the Ejector Condenser, 126
Brush Electrical Engineering Co., Ltd., 37,500-kW Ljungström Turbine, 62
Brush Surface Analyser, A. C. Wickman, Ltd., 231
Buenos Aires Transport Corporation, One-man Buses, (56)
Buick Aero-engines, (56)
Bunnerong, 50,000-kW Turbo-alternator, C. A. Parsons and Co., Ltd., 285, 299, 316
Burden, H., Cemented Carbides, (19)
Butterley Company, Ltd., The "Butterley" Standard Bridge, 356

C

CADMAN, Lord, Obituary, 369
"California Clipper," Flight to Singapore, (328)
Callender, T. O., Obituary, (328)
Cammell Laird and Co., Ltd., H.M. Battleship "Prince of Wales," 287
Canadian Industries, Ltd., Nylon Plant, (87)
Canadian National Railways, "The Continental Limited," E. H. Livesay, 172, 188, 252
Canadian Pacific Railway Co., Ski Specials, (106); "The Dominion" Transcontinental, E. H. Livesay, 346, 362, 378
Cape Cod Canal, Lighting, (122)
Carruthers Point, Lake Ontario, Water Intake, (234)
Carter Process for Sensitised Metal Templates, 54
Caterpillar Tractor Co., Rubber-tyred Industrial Tractor, 200
Chamber of Shipping, Annual Report, 139, 155
Chapman, S., Kelvin Lecture, (88)
Chats Fall Generating Station, Ottawa River, Dismantling 28,000 H.P. Turbines, 241
Cheetham, G. A., Personnel and Procedure, 38
Chemical Oil Processing Co., Polymerol Drying Oil, (122)
Chicago, Rock Island and Pacific Railway, Motor Locomotives, 359
Chicago, South-West, Sewage Works, 200
Christie, A. G., Present-day Power Trends, 419
Citrine, Sir W., Aircraft Production in America, 139
Clark, E. Kitson, War Aims, 42; (Leading Article, 48); (Letters, 78, 98, 131, 148, 164, 196)
Clark, R. H., Watt Beam Engines at Deptford, 66
Clarke, Sir G. O., Presidential Address, London Chamber of Commerce, 345
Colorado River Water Power Scheme, (424)
Connecticut Road Survey, (376)
Consolidated Aircraft Corporation, "Liberator" Heavy Bomber, 216
Consolidated Industries, Ltd., Optical Glass Factory at Sydney, (202)
Contractor, G. P., and F. C. Thompson, The Damping Capacity of Steel and its Measurement, 388; (Leading Article, 384)
Contractors' Plant Association, Formation of, 361
Controlled Heat and Air, Ltd., Purification of Air and Gases, 420
Coode, A. T., Obituary, 31
Craven, Sir Charles, New Appointment, 393
"Crispin," H.M.S., Loss of, 139
Crompton Parkinson, Ltd., Fluorescent Tubular Lamps, (328)
Crompton-West Trolleybus Motors, 67
Crystal Palace Towers, 267
Cullis, C. G., Obituary, 289

D

DALTON Relics in Manchester, (72), (186)
David, W. T., Temperature and Latent Energy in Flame Gases, 268
Davies, S. J., Tests of a Kadenacy High-duty Moderate-speed Experimental Unit, 238
Delaware River Bridge, (360)
Delaware River Deepening, (289)
Delhi Broadcasting House, (344)
Delray Power Station, Detroit Edison Co., Extensions, 152
De Neuman, A. M., The Economic War and the Engineering Industry, 2
Denholm, W. H., Munitions Labour Supply Organisation, 203, 209
Deptford Pumping Station Engines for Scrap, 57, (138); (Letter, 66)
Deschimag Shipyard, Bremen, 180
Detroit Edison Co.'s Delray Power Station, 152
Detroit Testing Machine Co., Brinell Hardness Tester for Plates, (186)
Dickinson, H. W., James Nasmyth as a Tool Maker, 337
Dixon, T. H., and Co., Ltd., Coating Machine for Sensitised Paper and Paper Reeler, 192
Dollin, F., Steam Turbine Nozzle and Blading Efficiency, 53, 69
Dominion Tar and Chemical Co., Ltd., Flake Phthalic Anhydride Plant, (392)
Dorey, S. F., Progress in Marine Engineering (Lowe Gray Lecture), 76, 90
Drury, H. G., Obituary, (138)
Duckham, Alexander, and Co., Ltd., "Britannia," 265
Duddell Medal Award to Professor E. O. Lawrence, 1
"Duke of York," H.M.S., Launch, 25
Dunagan, W. M., The Sorting of Aggregates, (266)
Dunn, J. A., Iron in India, (360)
Dynnik, S. A., A Circular Loom, (161)

E

EDGWICK Optical Dividing Head, Alfred Herbert, Ltd., 36
Edwards, W. S., Obituary, (56)
"E. H. Blum," All-welded Tanker, Atlantic Refining Co., (344)
Ellaby, C. H., Protective Coatings for Steel Work, 303
Engineering, 70th Birthday, 21
"Ernest Lapointe," Canadian Icebreaker, (250)
Evans, J. T., Facts about the Rifle, 370
Evans, R. H., Stress Distribution in Reinforced Concrete Arches, 301
Eves, P., New Atlantic Flight Record, 73

F

FAIRBURN, C. E., Oil-electric Shunting Engines on the L.M.S., 326
Fairey "Fulmar" Fleet Air Arm Fighter, 9
Faraday Medal Award to Dr. A. P. M. Fleming, 89, 313
Federation of British Industries, Annual Meeting, (241)
Fenton Smith Brothers, Rotary Vacuum Pump for Aircraft, 52
Ferguson, R., Obituary, (202)
Ferranti Ltd., Transformer Work in 1940, 27; Automatic Voltage Regulators, 50; High-Voltage Testing Equipment, 62
Finch, G. I., Explosives, 340
Finnboda Shipyard, Stockholm, Extensions, (154)
Finniecome, J. R., Non-dimensional Characteristic Design Factors for Turbo Machines, 276
Firth, Thos., and John Brown, Ltd., Cemented Carbides, (19)
Fischer Bearings Co., Ltd., Delivery of Bearings, (311)
Fleming, A. P. M., Faraday Medal Award, 89, 313
Focke-Wulf "Kurier," German Bomber, 57
Ford Company of America, Aero-engine Activities, (328)
Forrest Lecture, The Mechanical Properties of Solids, E. N. da C. Andrade, 294, 380, 394
Forster, A. Lindsay, Concrete for Building, 49
Fox, C., Engineers and the Future, 148
"Frank Rayner," Trent Motor Tug, 342
Franklin, C. H. H., Presidential Address, Birmingham Metallurgical Society, 171, 264; (Letter, 243)
Fraser, Kenneth, Obituary, 131
French, J. W., Propaganda by Boasting, 79
Fuhrman, R. E., Sludge as Fuel, (250)

G

GALLOWAY, D. F., Swarf Breakers, (234)
Gardner Self-cleaning Strainer, Alley and MacLellan, Ltd., 198
Garrard, C. J. O., Coming Crisis in Electrical Power Transmission, 402
Gartside, M. J., The Principles of Automatic Temperature Control, 324
Gas Research Board, 161
General Electric Co., Ltd., Electric Furnaces, 60; Lighting Developments, 61; Trolleybus Motors, 68; Alnico—Permanent Magnet Alloy, (273)
General Electric Co. of America, Lead Sheathing Cable, (154); Paper for Electrical Insulation, (266); Wind Turbine Propeller, (344)
General Motors of Canada, Guns for Aeroplanes, (392)

Giffen, E., and W. A. Tookey, Automobile Research, 361
Gittins, G. E., Obituary, 82
Given, R. D., Obituary, 176
Glasgow Corporation's Bus-washing Equipment, (56)
Glen Affric Power Scheme, 361, 409
Godwin, F. W., Colloidal Fuel, (122)
Goodyear Tyre and Rubber Co., "Chemigum" Synthetic Rubber for Tyres, (55), (408)
Gordon, Lord Dudley, New Year Message to F.B.I., 1
Grace Line, Gulf Ports Freight Service, (250)
Grand Coulee Dam, Washington, 203, 207, 221, (312)
Grand Union Canal Co., Annual Meeting, 283
Great Northern Railway of Ireland, Peat for Locomotives, (202)
Great Ouse Flood Protection, Sir M. MacDonald and Partners' Report, 159, 174
Great Western Railway, Norton Fitzwarren Accident, 1; Swindon Works, 49; Fire Fighting Trains, (138); Annual Meeting, 187; Mr. C. B. Collett's Retirement, (360); Loss of Steamer "St. Patrick," (408)
Greenville Steel Car Co., Truck for Transporting Large Ingot Moulds, (282)
Gresley, Sir Nigel, Obituary, 244
Gretna Junction Accident, L.M.S. Railway, 73
Griffiths, H. G., Means for Facilitating Machine Scraping, (56)
Grimshaw's Locomotive Catechism, (408)
Grondona, L. St. C., Price Stabilisation, 231
Guaranty Trust Co., of New York, Cost of Rearmament, 280
Guy Motors, Ltd., Works Artificial Sunlight Treatment, 398
Gyobu Dam for Rangoon Water Supply, 23 (*Supplement, January 7th*, 1941)

H

HADFIELD, Sir Robert, Bequests, 139
Hadfields, Ltd., Engineering Firms and the Excess Profits Tax, 219
Haigh, B. P., Obituary, 81
Haigh Fatigue Testing Machine, E. Warlow-Davies, 350
Hall, Albert, Obituary, 163
Hall, W. C., New Type of Power-torque Meter, 119
Hallett, W. N., Salary of Engineers in Government Service, 387
Hamburg, R.A.F. Targets in Germany, 385
Hamilton, S. B., The Use of Cast Iron in Building, 277
Hampsheir, J. W., Obituary, (71)
Hardy, A. C., Ship of the Future, 136
Harvey Frost and Co., Ltd., Vulcaniser for Cable Jointing, 85
Harwood, W., Locating Plugs, 66
Hayes, Sir Bertram Fox, Obituary, (344)
Head, Wrightson and Co., Ltd., Large Ingot Bogie, (328)
Hele-Shaw, H. S., Obituary, 97
Helmer, C. H., A "Go-as-you-Please" Technology, 414
Herbert, Alfred, Ltd., Edgwick Optical Dividing Head, 36
"Hermelin," Hong Kong Built Motorship, 46
Hewittic Electric Co., Ltd., Portable Rectifier Equipment, 120
Highgate Station, L.P.T.B., (88)
Hildage, H. T., War Aims, 78
Hill, A. V., Science and the State, 134; (Leading Article, 130); (Letter, 164)
Hill, T. U., Obituary, (88)
Holbeche, H. W., Locating Plugs, 115
Holt, Sir Richard, Obituary, 203
Homer, C. E., Hot Tinning, 113
Hong Kong Centenary and Applied Science, C. A. Middleton Smith, 99, 108, 124, 140, 156; (Leading Article, 162)
"Hood," H.M.S., Design of, 345
"Hood," H.M.S., and the "Bismarck," 357; (Leading Article, 353)
Hopewell Iron Plantation, Pennsylvania, 118
Hopkinsons, Ltd., Automatic Electrically Controlled Soot Blowers, 374
Howrah Bridge, India, 5, 134
Humphreys, C. L. Howard, Appointed Director of Works, 1
Hungarian Bauxite Co., Ltd., Aluminium Manufacture, (122)
Hyde, R. R., Supply of Trained Welfare Workers for Industry, 275

I

"ILLUSTRIOUS," H.M. Aircraft Carrier, 13
Imperial Chemical Industries, Ltd., Annual Report, 329
Imperial Institute, Annual Report, 107
Incandescent Heat Co., Ltd., Gas-fired Heat Treatment Plant, 247
Ionian Sea, Battle of, 228; (Leading Article, 226)
"Iscor" Steel Works, 129
Isthmian Steamship Line, Round-the-World Service, (72)

J

JAHN, F., and Co., Plant for Converting Potato Pulp to Flour, 410
Jamalpur Bridge, Ahmadabad, 344
Jamieson, C. D., Woven Glass Insulation for Electrical Windings, 38
Jeffries, C. W., Obituary, (424)
Jennings, J., Dimensionless Characteristics of Turbines and Pumps, 12
Joffe, A. F., Awarded Soviet Order of Lenin, (106)
Johnson, Amy, Memorial Scholarship, (177)
Johnson, G. F., Apprenticeship, 321
Johnson, P. H., The Mechanical Requirements of the Royal National Lifeboat Institution, 149
Johnson and Phillips, Ltd., Fuses with Striker Pin Tripping Devices, 230
Jones, E. H. (Machine Tools), Ltd., Low Load Lifting Truck, 104
Jones, J., Town's Gas Fuel for Petrol Engines, 49, 115
Jones and Laughlin Steel Corporation, Oil-tempered Wire, (40)
Journal of Commerce, Annual Review of Shipping, (88)

K

KADENACY High-duty Moderate-speed Experimental Unit, Tests of a, S. J. Davies, 238
Kagan, I. S., Arc Welding CrV Steel, (106)
Karaganda, U.S.S.R., Coal Deposit, (390)
Kaye, G. W. C., Obituary, 267
Kegums Power Plant, Latvia, 217
Kellogg, A. P., Floating Power Plant, (234)
Kendall and Gent (1920), Ltd., CVM 25 Vertical Milling Machine, 199
Kennedy, R., Peace Aims, 164
Kent, R. T., The Analysis of Sales Data, 104
"King George V," H.M. Battleship, 84
King George VI Bridge, Aberdeen, (186)
Kita, Dr., New Iron Catalyst, (79)
Knight, W. C., Obituary, (376)
Knowlton, P. H., and G. B. Warren, Relative "Engine Efficiencies" Realisable from Large Modern Steam Turbine Generator Units, 102
Knox, S. L. G., and J. I. Yellott, A New Steam Engine and Boiler, 197

L

LACHINE Canal Bridge, C.N.R., (250)
Lamport and Holt Line, Ltd., Annual Meeting, 219
Leningrad Harbour, (360)
Letts, Charles, and Co., "Raid Spotters' Pocket Book," (234)
Leverhulme Research Fellowships, (106)
"Liberator" Heavy Bomber, Consolidated Aircraft Corporation, 216
Lincoln Electric Co., Ltd., Welded Steel Frame Carillon, 200
Lithium Corporation of America, Developments, (250)
Livesay, E. H., Further Canadian Locomotive Experiences, Nos. I, II, and III, C.N.R., "The Continental Limited," 172, 188, 252; Nos. IV, V, and VI, "The Dominion" Transcontinental, C.P.R., 346, 362, 378; Finance of American Railways, 49; The Southern Railway "Pacific," 354
Lloyd's Register of Shipping, American Surveys, 95; Scholarship, (122)
Lockheed "Hudson" Coastal Reconnaissance Aircraft, 9
Lockwood, L. P., Economic Production, 49
Londex, Ltd., High-speed Fire Alarm for Detecting Incendiary Bombs, 225
London Chamber of Commerce, Presidential Address, Sir G. O. Clarke, 345
London Electric Wire Co. and Smiths, Ltd., "Electrical Engineers' Companion," (307)
London Midland and Scottish Railway, Crewe Station Loudspeakers, (72); Gretna Junction Accident, 73; Salvage Record, (154); Annual Meeting, 171; "Troop" Specials, (202); Paper Reclamation Scheme, (234); Splinterproof Glass, (234); Travelling Canteens, (250); Sir T. Royden Appointed Chairman, 283; Oil-electric Shunting Locomotives, C. E. Fairburn, 326; The Action of the Haigh Fatigue Testing Machine, 350; "King George VI" Locomotive, (360)
London and North-Eastern Railway, Great North of England Line Centenary, 21, (72); Collision near Brentwood, 107; New 2–6–2 Type Engine, 144, (Letter, 164); Annual Meeting, 171; Bow Road Station, Closing, (266); Mr. E. Thompson Appointed C.M.E., 283; Mr. W. H. Richards Appointed Chief Electrical Engineer, 283; Train Fire near Claypole, (296); Suburban Services, (376); Reorganisation of C.M.E.'s Department, 377
London Passenger Transport Board, "Diesel-Line" Electric Locomotive, 309
Lorant and Co., Ltd., "Rindia" Rotary File, (138)
Loutrel, L. F., "Ferri-sul" Pickling Agent, (218)
Ludwigshafen-am-Rhein, R.A.F. Targets in Germany, 127

M

MAAS Tunnel, Holland, (376)
MacDonald, Sir M., and Partners, Great Ouse Flood Protection, 159, 174
MacNaughton, A. G. L., Presentation of Kennedy Medal, I.E.E., 313
Macrome, Ltd., Extensions to Treatment Plant, (296)
Madera Canal, (328)
Madras Water Supply, (122)
Manchester Road Repairs, 155, 391
Manchester Ship Canal Co., Annual Meeting, 155
Manchukuo Bridge, (424)
Manchuria Mining Development Co., Manganese Deposits, (280)
Mannheim, R.A.F. Targets, 110, 215
Marshall, C. F. Dendy, Links in the History of the Locomotive, 402
Mauldin, Lieut.-Colonel H. H., Obituary, 361
Mavor and Coulson, Ltd., Clay Conveying Plant, 245; Aerial Ropeway and Band Conveyors at a Brickworks, 293
McLaren, J. and H., Ltd., Oil Engine Driven Traction Engine, 279
McMurtrie, F., Naval Construction in 1940, 13, 25; (*Supplement, January 3rd*, 1941)
Merriman Dam, Delaware Aqueduct, 24 (*Supplement, January 3rd*, 1941)
Merritt, H. E., Epicyclic Gear Trains, 190, 213; (Letter, 243)
Merryweather and Sons, Ltd., Locomotive Fire-engine, Southern Railway, 421
Metal Photo-Drafting Co., Sensitised Metal Templates, 54
Metropolitan-Vickers Electrical Co., Ltd., Turbo-generator Work in 1940, 17; Factory Lighting in Wartime, 37; Rolling Mill Drives, 50; Vapour Discharge Projector Lamp, 61; Trolleybus Motors, 67
Milburn Co., "Ply No. 9" Protective Compound for Perspiration Damage, (370)
Mills, G., The Future of Transport, 155
Milwaukee Railroad Budget, (266)
Minetti and Co., Flour Mill in Cordoba, (328)
Mirrlees, Bickerton and Day, Ltd., 540 B.H.P. Marine Oil Engine, 34
Mobile Harbour Works, Gulf Coast, 319
Mobile Tunnel, Alabama, 7 (*Supplement, January 3rd*, 1941)
Moir, Arrol, Prepare Now! 415
Montreal Locomotive Works, Extension, (88)
Morgan, W. T., Obituary, (164)
"Mormacpenn," United States Motorship, 45
Morton, Alexander, and the Ejector Condenser, R. Bruce, 126
Morton, L. T., Ships' Cargo-handling Gear, 256
Moscow Soviet Palace, (154)
Murray, Dr. Charles, Obituary, (266)
Myers, C. S., Some Psychological Problems of the Scientific Worker, 64; (Letter, 98)

N

NASH, A. W., Lubricants Problems of the Axis, 387
Nasmyth, James, as a Tool Maker, H. W. Dickinson, 337
New York Central Railroad, Eight-coupled Passenger Engines, 273
New York Level Crossings, (266)
Newstead, S. G., Engineers and the Future, 115
Niagara Falls Power Development, (218)
Nicholl, J. S., The Development of Goods Transport by Road, (122)
Nock, W. H., Obituary, (170)
Norfolk Flood Dam, Arkansas, (328)
"North Carolina," American Battleship, 251
Northern Aluminium Co., Ltd., Aluminium Scrap for Aircraft, (88); Machining Aluminium Alloys, (218)
Norton Fitzwarren Accident, Great Western Railway, 1

O

OERESUND Shipbuilding Co., Transfer of Capital, (266)
Oerlikon Co., Petersen Coil Design, 68
Ohio River Flood Wall, (234)
O'Neill, H., A "Go-as-you-Please" Technology, 211
Oppau Ammonia Factory, Germany, 127
Ormerod Shapers, Ltd., Traversing Head Slotting Machine, 86
Osborn, H. B., Surface Hardening by Induction, 372
Otis Steel Co., Blast-furnace Record Run, (20)
Owen, Sir David, Obituary, 329

P

PALMER, W., Steel *v.* Copper Fire-boxes, 370
Pan-American Airways, Large Air Liners, (296)
Panama Canal, New Locks, (20); Traffic Statistics, (282)
Panama Contractors, Inc., Combine, (424)
Paracale Iron Mines, Philippines, Production, (359)
Parsons, C. A., and Co., Ltd., Turbo-generators in 1940, 16; 50,000-kW Turbo-alternator for Bunnerong, 285, 299, 316
Parsons, R. H., McNaughted Engines, 66
"Pasteur," French Liner, 16 (*Supplement, January 3rd*, 1941)
Pennsylvania Iron Plantations, 118
Petersen Coil Design, Oerlikon Co., 68
Petsamo Nickel Mines, (344)
Pit River Bridge, California, (360)
Pohl, R., Flux Distribution and Armature Reaction in D.C. Interpole Machines, 83
Pollard, F., Obituary, (186)
Port Macquarie Power Station, Australia, (111)
Portland Shipyard, U.S.A., 398
Potomac Road Bridge, U.S.A., (170)
Prescott, Sir W., Canals in Wartime, 123
"Prince of Wales," H.M. Battleship, Cammell Laird and Co., Ltd., 287

Q

"QUEEN ELIZABETH," Cunard White Star Liner, 15 (*Supplement, January 3rd*, 1941); at Cape Town, 21
Queens Midtown Tunnel, New York, 7

R

RAINBOW Bridge, Niagara River, (186)
"Rajputana," H.M. Merchant Cruiser, Loss of, 283
Rankine, W. J. M., 183
Read, J. C., Efficiency Measurements of Rectifier Equipments, 142, (180)
Rees, H. V., A Petrol Stabiliser, (266)
Refrigeration Insulation Manufacturers' Association, Formation, (56)
Reid, W., Deeper Mining Problems, 310
Rendel, Palmer and Tritton, Howrah Bridge, India, 5, 134
Republic Steel Corporation, Dewey Tapered Tubes, (282)
Reveirs, George, Obituary, 227
Reyrolle, A., and Co., Ltd., Switchgear in 1940, 17; Low-voltage transformers for A.R.P. Shelters, 86
Rhodin, J. G. A., Obituary, 211
Richards, C. S., Obituary, 97
Richards, W. H., Appointed Chief Electrical Engineer, L.N.E. Railway, 283
Richmond Shipyard, U.S.A., 398
Rissik, H., The Coming Crisis in Electrical Power Transmission, 348, 364; (Letters, 402)
Ritchie, Lord, Retirement from P.L.A., 235
Robb, C. A., The Life of Gauges, (408)
Roberts, R. H., Appointed Bristol Channel Port Director, (138)
Robertson, D., Obituary, 46
Robinson, E. A., The Nicholson Siphon, 164
Ross Dam, U.S.A., 74, 92
Royden, Sir T., Appointed Chairman, L.M.S. Railway, 283
Russell, E. D., Salary of Engineers in Government Service, 354
Russell, E. D., Selection and Training of Apprentices, Practical Training, 273; (Leading Article, 274); (Letter, 321)
Ryves, R., Refloating Sunken Ships, 163

S

SABIE, Transvaal, Hydro-electric Generating Plant, 47
St. John, N.B., Harbour Additions, (312)
St. Lawrence Waterway Project, 66, (186), 203, (282), (296)
"St. Patrick," G.W.R. Steamer, Loss of, (408)
Samson, J. B., Other Factors of Economic Production, 65
Samuelson, F., Retirement from B.T.H. Co., Ltd., 345
Santa Fe, Great Northern and Burlington Railways, "Pendulum" Suspension Coaches, 145
Schaefer, V. T., Preserving Ice Flakes, (360)
Shawinigan Chemicals, Ltd., Canadian Coking Process, (88)
Schneider Works, Le Creusot, Reopening, (218)
Schuster, L. W., Mechanical Properties of Materials and Failure in Service, 389
Scottish Power Co., Ltd., Annual Meeting, 187
Scottish Special Housing Association, Ltd., All-concrete Houses, 267
Selizharovo Coal Trust, Russia, New Coal Deposits, (51)
Sharp, Pilot Officer G. G., Obituary, (328)
Shaw, G. E., Refloating Sunken Ships, 196
Shell Oil Co., Petroleum-toluol Plant, (186)
Short-Mayo Composite Aircraft, (392)
Silley, J. H., Obituary, 82
Simon, F., The Significance of Low-temperature Research (May Lecture), 345
Skoda Works, A.A. Gun Output, (122)
Smail, David, Obituary, (408)
Smith, Sir Allan, Obituary, 147
Smith, C. A. Middleton, Hong Kong Centenary and Applied Science, 99, 108, 124, 140, 156; (Leading Article, 162)
Smith, E. C., Propaganda by Boasting, 31, 115
Society of British Aircraft Constructors, 187
"Sokol," Polish Submarine, Launch, 57
"Solon Turman," Launch, (360)
South African Iron and Steel and Industrial Corporation, Steel Works, 129
"South Dakota," American Battleship, (408)
Southern Railway, "Merchant Navy" Class Pacific Engine "Channel Packet," 181, (424); (Letter, 354); Annual Meeting, 187; Sir G. E. Schuster Co-opted a Director, (392); Locomotive Fire-engine, 421
Squire, H. B., and A. M. Binnie, Liquid Jets of Annular Cross Section, 236
Stamp, Lord, Obituary, 275
Standard Steel Spring Co., Tin-plates by a New Process, (281)
Steel Co. of Canada, Ltd., 110in. Plate Mill, (408)
Steele, J., The Electric Battery Vehicle, 335
Stockholm City Tramway Co., Methane Gas from Sewage, (72)
Stockholm Sewage Disposal Plant, (312)
"Stockholm," Swedish-America Liner, 16 (*Supplement, January 3rd*, 1941)
Stockholm Technical University, Chair in Technical Physics, (282)
Stockton and Hartlepool Railway, Centenary, (154)
Stodola, Dr. A., Watt International Medal Award, (51), 73, 78
Storey Bridge, Queensland, Lighting, (88)
Stratton, T. P., Stepping-up Union of South Africa's War Effort, 216
Stuart, R. F., Obituary, (392)
Summerson, R. B., Obituary, (56)
Sunbeam Commercial Vehicles, Ltd., Locating Plugs, 98
Superheater Co., Ltd., The Nicholson Siphon, 164
Swan, A. W., Two Aids to the Use of Logarithmic Chart Paper, 291
Swindon Works, Great Western Railway, 49
Syrett, W. W., Financing Exports of Specialised Manufactures, 371

T

TABLE Bay Harbour Record, 311
Tacoma Bridge, Puget Sound, 6
Tandy, R. L., Other Factors of Economic Production, 32; (Letters, 49, 65)
Taylerson, E. S., Atmospheric Exposure Tests on Copper-bearing and other Irons and Steels in the United States, 308
Taylor, E. Brough, Obituary, 131
Thompson, E., Appointed C.M.E., L.N.E. Railway, 283
Thompson, F. C., and G. P. Contractor, The Damping Capacity of Steel and its Measurement, 388; (Leading Article, 384)
Throssell, S. G., Business Men and Civil Service, 164
Tilling, Thomas, Ltd., Producer Gas for Road Transport Vehicles, 123
Tin Research Institute, Annual Report, (303)
Tookey, W. A., and E. Giffen, Automobile Research, 361
Trans-Canadian Air Lines, 1940 Statistics, (296)

Trent Navigation Co., Ltd., Motor Tug "Frank Rayner," 342
Trifitt, J., Obituary, (376)
Troup, J. D., Science and Secrecy, 164
Tuplin, W. A., A "Go-as-you-Please" Technology, 211
Turnbull, C., New Engineering Terms, 243

V

VAN Antwerpen, F. J., Filtering Media, (117)
Van Deventer, J. H., Reflections, 69
Vent-Axia, Ltd., Ventilator for Air Raid Shelters, 86
Victoria Falls Power Company, 18
Villeneuve St. Georges Bridge, Seine, 5
Vinten, W., Ltd., Motion Picture Camera for Engineering Research, 193
Vivian, A. C., A "Go-as-you-Please" Technology, 177
Volga-Baltic Canal, (282)
"Voltaire," Merchant Cruiser, Loss of, 297
Vulcan Foundry, Ltd., Oil-engined Railcars for New Zealand, (312)

W

WAKEFIELD, Lord, Obituary, 65
Walker, Crosweller and Co., Ltd., Arkon Seat-in-Sleeve Valve, 86
Walker, H., The Use of the Word "Accuracy," 164
Walker, H. F., Electric Melting Furnaces, (138)
Walker, Professor Miles, Obituary, 82
Warlow-Davies, E., The Action of the Haigh Fatigue Testing Machine, 350
Warren's New Holland Shipyard, Ltd., Trent Motor Tug "Frank Rayner," 342
Warren, G. B., and P. H. Knowlton, Relative "Engine Efficiencies" Realisable from Large Modern Steam Turbine Generator Units, 102
"Washington," American Battleship, 329
Watermeyer, T. H., Retirement from South African Railways, 248
Waters, J. F., The Use of the Word "Accuracy," 211
Watt International Medal Award to Dr. Stodola, (51), 73, 78
Watts Bar Lock, Tennessee River, (376)
Weir, D., Facts About the Rifle, 314, 330; (Letters, 370, 401)
West Rand Consolidated Mine, Krugersdorp, Shaft Sinking Record, (138)
Weston, H. C., Industrial Lighting in Wartime, (88)
White, R., and Sons, Aerial Ropeway and Band Conveyors at a Brickworks, 293
Whitehaven Colliery Explosion, 361
Whitehead, A. C., Locating Plugs, 31, 133; Waiting Time, 370
Wickman, A. C., Ltd., Thread Grinder, 120; Bausch and Lomb Optical Protractor, 152; Bausch and Lomb Brinell Microscope, 153; The Brush Surface Analyser, 231
Wild-Barfield Electric Furnaces, Ltd., New Works, 151
Wilhelmshaven Air Raid Damage, 262
Wilkinson, G. H., London's War Weapons Week, 305
Williams, A. E., Hydrogenation and the War, 58
Williams, Sir Thomas, Obituary, 329, (344)
Williamson, Captain A., Obituary, (56)
Wilsdon, B. H., The "Woolindras" Process, 264
Windeler, G. E., Mechanical Mishaps, 283
Windes, S. L., Damage from Vibration, (282)
Wimperis, H. E., "Defeating the Bomber," 355
Woolindras Process, (234); (Letter, 264)

Y

YELLOTT, J. I., and S. L. G. Knox, A New Steam Engine and Boiler, 197
Yonge Street Bridge, Canadian National Railways, (20)
Youghal Bridge, Cork, (218)
Yucatan Railways, (202)

Subjects

A

ACCIDENTS in Factories, Report, 139, (202)
"Accuracy," The Use of the Word, H. Walker, 164; J. F. Waters, 211
Acid from Seaweed, (31)
Adventures of an Engineer, W. J. E. Binnie, 317
Advisory Committee of Engineers, 294; (Leading Article, 304)
Aerial Cableways in East Africa, (282)
Aerial Ropeway and Band Conveyors at a Brickworks, Mavor and Coulson, Ltd., and R. White and Sons, 293

AERONAUTICS:

Aeronautics in 1940, 7
Air Mail Route, New (Burma, India, &c.), (360)
Air Raid Damage in Germany (Berlin and Mannheim), 215; Bremen and Wilhelmshaven, 262
Air Training Corps, 41
Airgraph Letter Service, (296)
Airships, United States Navy, (20)
Aluminium Scrap for Aircraft, H. F. James, (88)
Ambulance, Flying, U.S. Gift, (376)
American Aeroplane Factory Construction, 200
American Aeroplane Output, (328)
American Aircraft Contracts, (40)
American Aircraft Production, Sir W. Citrine, 139
American Bombers, Production of, (376)
Appointments, New, 377
Atlantic Flight Record, Captain P. Eves, 73
Australia, Aeronautical Research in, 280
"Battle of Britain," 272
Bomber, Defeating the, H. E. Wimperis, 355
Bomber (Night) and Fighter Losses, Enemy, 313
Bombing Raids, 226
Bombing Raids on Germany, 57
Bombs, A Little Sum in, 49
Britain's Growing Air Power, 194
British Aircraft Production, 203
British Aircraft, The Strength of, 57
British Overseas Airways, (138)
Corrosion of Aircraft Metals, (20)
Craven, Sir Charles, Controller, Ministry of Aircraft Production, 393
Dive-bomber *versus* the Navy, 96
Electric Storms, Flying in, 258
Enemy Aircraft, The Destruction of, 377
Enemy Night Bomber and Fighter Losses, 313
Flying in Electric Storms, 258
Germany, Bombing Raids on, 57
Guns for Aeroplanes, Windsor, Ontario, Plant, (392)
High-flying Aircraft, 416
Indian Names for Air Squadrons, (376)
Instrument Landing of Aircraft, 255, 271
Magnesium for American Aircraft, (312)
Metal in Aeroplanes, P. W. Bidwell, (88)
Ministry of Aircraft Production, Personnel Changes, 187; Sir Charles Craven's Appointment, 393
Night Bomber, Destroying the, 368
Night Bomber and Fighter Losses, Enemy, 313
Night Bombers, The Detection of, 329
Night Bombing, 10, 210, 320
"Other Devices," 210
Parachute Jumps, Recording Device for, (344)
Physics of Air Raids, J. D. Bernal, 262
"Pick-up" Air Mail Service, All-American Aviation, (296)
Plastics for Aircraft ("Vidal"), (40)

AERONAUTICS (*continued*):

Production and Acquisition of Aircraft, 288
Qantas-Empire Airways, Transport of Scientific Instruments, (56)
Radio Location, 393
Research, Aeronautical, in Australia, 280
Royal Air Force, Engineering Vacancies, (20); Bombing Raids on Germany, 57; Technical Corps (Canadian Lead), 146; Strength of, 171; Electricians, (328)
Royal Air Force Targets in Germany, No. XVI, Mannheim, 110; No. XVII, Ludwigshafen-am-Rhein, 127; No. XVIII, Bremerhaven and Bremen, 179; No. XIX, Bremerhaven and North German Seaports, 223; No. XX, Dusseldorf and Neuss, 306; No. XXI, Hamburg, 385; Lists of Articles, 161, 339
Royal Observer Corps, (266)
Scholarships, Amy Johnson Memorial, (177)
South African Air Services, (88)
South African Airways, (202)
Sun Lamps for Night Fighter Pilots, (392)
Tizard, Sir Henry, Appointed to Air Council, 377
Trans-Canadian Air Lines, (296)
Trans-Tasman Air Service, (360)
"Vidal" Plastic for Aircraft, (40)
Wind Tunnel at Dayton, Wright-Field Co., (312)

Aerodromes:

Airport Protection and Defence, 293
American Air Force Bases, 66
American Airport Activities, 79
Brisbane Aerodrome, (56)
Building Aerodromes, Delay in (Select Committee on National Expenditure), 219
Economics in American Airport Design, 399
Hangar, All-welded, at Baltimore, (250)
Instrument Landing of Aircraft, 255, 271

Aero-engines and Aircraft:

Aircraft and Aero-engines, New, 216
American Aeroplanes, 267
American Air Liners, Four-engined, (296)
Bell "Airacobra" Pursuit Plane, 9
Blackburn "Botha" Toepedo Bomber, 84
Boeing Flying Boats for Great Britain, (376)
Boeing "Flying Fortress" Super-bomber, 9, (266)
British Aircraft, New, 41
Buick Aero-engines, (56)
"California Clipper" Reaches Singapore, (328)
Fairey "Fulmar" Fighter, 9
Flying Boats for British Airways, Ltd., (408)
Focke-Wulf "Kurier" German Bomber, 57
Ford Company's Aero-engine Activities, (328)
German Aircraft in 1940, 8
Grumman "G36" Naval Fighter, 41
Hawker "Tornado" Single-seater Fighter, 41
"Liberator" Heavy Bomber, 216
Lockheed "Hudson" Coastal Reconnaissance Aircraft, 9
"Melbourne" Qantas-Empire Airways Air Liner, (56)
Napier "Sabre" Aero-engines, 216
Short-Mayo Composite Aircraft, (392)
Short "Stirling" Heavy Bomber, 41

Aesthetics in Engineering, 319
Aesthetics, Engineering Economics and, 421
Agricultural Tractors, (88)
Aggregates, The Sorting of, W. M. Dunagan, (266)
Air and Gases, Purification of, Controlled Heat and Air, Ltd., 420

AIR RAID PRECAUTIONS:

A.R.P. Training Bulletin, (106)
Anti-aircraft Gun, American, (56)
Black-out, Workshop, (88)
Dalton's Scientific Apparatus Destroyed, (72)
Deep Shelter in London Tubes (Select Committee on National Expenditure), 345
Emergency Repair of Air Raid Damage, 123
Fire Alarm, High-speed, for Detecting Incendiary Bombs, Londex Ltd., 225
Fire Bomb Fighting, 57
Fire Detection Devices, 123
Fire Prevention Order, 203
Fire Protection of Structural Steel Work, 229
Glass Protection Exhibitions, (341)
Glass, Splinter-proof, (234)
Helmets, Steel, Civilian Type, 107
Physics of Air Raids, J. D. Bernal, 262
"Raid Spotters' Pocket Book," (234)
"Raidsafe" Shelters, Andamite Ltd., (275)
Railways and Air Raids, 367
Rebuilding of Bombed Property, 375
Shelter, New Indoor, 123, (234), 235
Sound-spotting Scheme, Benjamin Electric, Ltd., 184
Steel-framed Buildings, Strength of, 345
Surgery and Cleansing Station, British Timken, Ltd., 397
Transformers, Low-voltage, for A.R.P. Shelters, Reyrolle and Co., Ltd., 86
Ventilator for Air Raid Shelters, Vent-Axia, Ltd., 86

Alcohol, Power, from Sugar, (296)
Alcohol from Wood, "Defibrator" Method, (106)
Aliens, Employment of, 41
Alloy, New High-temperature, (56)
Alloys, Grids of, with a Silver Content, (296)
Alloys, Italian, (408)
Alnico-Alloy by Sintering, (273)
Aluminium Alloys, Machining, Northern Aluminium Co., Ltd., (218)
Aluminium for Japan, (20)
Aluminium Manufacture in Hungary, (122); in Travancore, (296)
Aluminium, The Need for, Aluminum Co. of America, (9)
Aluminium Products in America, (218)
Aluminium Scrap, (250), (408)
Aluminium Trade Control, South African, (72)
Aluminium in War, (392)
Aluminium Works for New South Wales, (287)
America, Export Trade with, 235
American Camp Construction, (339)
American Copper Supplies, (72)

AMERICAN ENGINEERING NEWS:

Aeroplane Factory Construction, 200
Æsthetics in Engineering, 319
Airport Activities, 79
Airport Design, Economics in, 399
Building Developments, 319
Chicago, South-West, Sewage Works, 200
Combustion Turbine Locomotives, 232
Double-leaf Swing Bridge Over Inland Waterway Canal, 399
Drainage of Deep Mines in Pennsylvania, 319
Earthquake Resistant Tower, Stanford University, 273
Housatonic River Bridge, Novel Piers, 133
Inland Waterway Canal, Double-leaf Swing Bridge, 399
Locomotive Working, 232
Locomotives, Combustion Turbine, 232
Locomotives, Passenger, Eight-coupled, 273
Marine Notes, 359
Military Roads, 133, 399
Military Water Purification Plant, 233
Mobile Harbour Works, 319
New York Central Railroad, Eight-coupled Passenger Engines, 273

AMERICAN ENGINEERING NEWS (*continued*):

Oil-Electric Locomotive, Care of, 79
Oil-Electric Locomotives, Chicago Rock Island Railway, 359
Pennsylvania Mines, Drainage in, 319
Steel Works Expansion, 399
Water Purification Plant, Military, 233

American Industrial Research, (249), 326
American Senate and House Chambers, Temporary Roof, (202)
American Tanks and Aeroplanes, 267
Ammonium Nitrate Plant at Turner Valley, Alberta, (154)
Ammonium Sulphate Factory at Tjepoe, East Java, (250)
Analyser, Brush Surface, A. C. Wickman, Ltd., 231
Analysis of Sales Data, R. T. Kent, 104
Andalusite for Aluminium, (122)

ANNUAL REVIEW:

A Retrospect, 10; Total War, 10; Engineers and the War, 10; Night Bombing, 10; Labour, 10; Iron and Steel, 11; The Future, 11; Conclusion, 11
Aeronautics in 1940, 7
Civil Engineering in 1940, 4, 23 (*Supplement, January 3rd*, 1941)
Economic War and the Engineering Industry, A. M. De Neuman, 2
Electrical Engineering in 1940, 16, 27, 50, 60
Harbours and Waterways in 1940, 43, 66
Naval Construction in 1940, F. McMurtrie, 13, 25 (*Supplement, January 3rd*, 1941)
Shipbuilding and Marine Engineering in 1940, 14, 44 (*Supplement, January 3rd*, 1941)

Anti-aircraft Gun, American, (56)
Appleyard, K. C., Director of Emergency Construction, 107
Apprentices, Selection and Training of—Practical Training, E. D. Russell, 273; (Leading Article, 274); (Letter, 321)
Architecture, Maintenance Scholarships in, (121)
Argentina, Standardisation in, (218)
Argentine Elevators, (312)
Arkon Seat-in-sleeve Valve, Walker, Crosweller and Co., Ltd., 86
Arms Factories in the Rand, 47
Armstrong Memorial Lecture, 89
Army Craftsmen, Training, 297, (376)
Artificial Sunlight Treatment, Guy Motors, Ltd., 398
Associated Portland Cement Manufacturers, Ltd., Annual Meeting, 251
Atmospheric Exposure Tests on Copper-bearing and other Irons and Steels in the United States, E. S. Taylerson, 308
Automatic Temperature Control, The Principles of, M. J. Gartside, 324
Avoidance of Bottle-necks in Production, 165
Axis, Lubricants Problem of the, 352; (Letter, 387)

ASSOCIATIONS, INSTITUTIONS & SOCIETIES:

ASSOCIATION, BRITISH CAST IRON RESEARCH:
Ventilation of Furnace Anti-glare Schemes, 387

ASSOCIATION, BRITISH ELECTRICAL AND ALLIED MANUFACTURERS':
Annual Meeting, 251, 291

ASSOCIATION, BRITISH ENGINEERS':
Mobilisation of Industry for the Purposes of War, D. A. Bremner, 22; (Leading Article, 30)

ASSOCIATION, CONTRACTORS' PLANT:
Formation, 361

ASSOCIATIONS, INSTITUTIONS & SOCIETIES (*continued*):

ASSOCIATION, NATIONAL SAFETY FIRST:
Change of Title, (63)

ASSOCIATION, REFRIGERATION INSULATION MANUFACTURERS':
Formation, (56)

ASSOCIATION OF ENGINEERS, MANCHESTER:
Automatic Temperature Control, The Principles of, M. J. Gartside, 324
Personnel and Procedure, G. A. Cheetham, 37

ASSOCIATION OF SCIENTIFIC WORKERS:
Annual Council Meeting, 361

INSTITUTE, AMERICAN PETROLEUM:
Petrol Stabiliser (Soya Bean Lecithin), H. V. Rees, (266)

INSTITUTE, IRON AND STEEL:
Annual Meeting, 248
Annual Report, 307
Atmospheric Exposure Tests on Copper-bearing and other Irons and Steels, E. S. Taylerson, 308
Bessemer Medal Award, (234)
Damping Capacity of Steel and its Measurement, G. P. Contractor and F. C. Thompson, 388; (Leading Article, 384)
Luncheon, 297

INSTITUTE OF BRITISH FOUNDRYMEN:
Fox Medal Awarded to W. J. Dawson, (186)

INSTITUTE OF ELECTRICAL ENGINEERS, AMERICAN:
Edison Medal Award, (282)
Instrument Landing of Aircraft, 255, 271

INSTITUTE OF EXPORT:
Price Stabilisation, L. St. Clare Grondona, 231

INSTITUTE OF FUEL:
Electric Battery Vehicle, J. Steele, 335
Students' Medal, (421)

INSTITUTE OF INDUSTRIAL PSYCHOLOGY, NATIONAL:
Psychological Problems of the Scientific Worker, C. S. Myers, 64
Training Industrial Workers, 107

INSTITUTE OF MARINE ENGINEERS:
Annual Meeting and Luncheon, 187
Awards, (138)
Lloyd's Register Scholarship, (122)

INSTITUTE OF METALS:
Platinum Medal Award to C. H. Desch, (234)
Significance of Low-temperature Research, F. Simon (May Lecture), (234), 345

INSTITUTE OF STEEL CONSTRUCTION, AMERICAN:
Beautiful Bridges, (408)

INSTITUTE OF TRANSPORT:
Metropolitan Graduates' Programme, (424)

INSTITUTE OF WELDING:
Luncheon, 289

INSTITUTION OF AUTOMOBILE ENGINEERS:
Automobile Research, W. A. Tookey and E. Giffen, 361
Luncheon, (415)

INSTITUTION OF CHEMICAL ENGINEERS:
Annual Meeting, (88)
Emergency Research, (266)
Luncheon, 235

INSTITUTION OF CIVIL ENGINEERS:
Deterioration of Structures in Sea Water, Eighteenth Report, 204
Engineering Economics and Æsthetics, 421
Ewing Medal Awarded to H. R. Ricardo, 294
Luncheon, 289
Mechanical Properties of Solids, E. N. da C. Andrade (Forrest Lecture), 294, 380, 394

INSTITUTION OF ELECTRICAL ENGINEERS:
Ashbridge, Sir Noel, Nominated President, (392)
Awards, (295)
Faraday and Kennedy Medal Awards, 89, (295), 313
Fire Detection Devices, 123
Kelvin Lecture, (88), (295), 313
Quartz Crystals, Use of, in Telecommunications, C. F. Booth, (88)

INSTITUTION OF ENGINEERS, JUNIOR:
Luncheon, 289

INSTITUTION OF ENGINEERS-IN-CHARGE:
Dinner, 313

INSTITUTION OF ENGINEERS AND SHIPBUILDERS, NORTH-EAST COAST:
Condensing Plant and Cooling Water Systems, The Design of, W. T. Bottomley, 404, 418; (Leading Article, 400)
Ships' Cargo-handling Gear, L. T. Morton, 256

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND:
Selection and Training of Apprentices—Practical Training, E. D. Russell, 273: (Leading Article, 274)
Ship of the Future, A. C. Hardy, 136

INSTITUTION OF GAS ENGINEERS:
Calorific Value of Gas, Standardisation of (Summer Meeting), 422
Wartime Fertilisers, (106)

INSTITUTION OF GREAT BRITAIN, ROYAL:
Explosives, G. I. Finch, 340
Physics of Air Raids, J. D. Bernal, 262

INSTITUTION OF LOCOMOTIVE ENGINEERS:
Oil-electric Shunting Engines on the L.M.S., C. E. Fairburn, 326

ASSOCIATIONS, INSTITUTIONS & SOCIETIES (*continued*):

INSTITUTION OF MECHANICAL ENGINEERS:
Annual Report and Meeting, 147
Benevolent Fund Annual Meeting, 203
Mechanical Mishaps, G. E. Windeler, 283
Mechanical Requirements of the Royal National Lifeboat Institution, P. H. Johnson, 149
Munitions Labour Supply Organisation, W. H. Denholm, 203, 209
Progress in Marine Engineering, S. F. Dorey (Lowe Gray Lecture), 76, 90
Steam Turbine Nozzle and Blading Efficiency, F. Dollin, 53, 69
Watt Medal Presentation, (51), 73, 78

INSTITUTION OF NAVAL ARCHITECTS:
Annual Meeting, 219, (224)
Features of Wartime Shipbuilding, W. Ayre, (328)
Research Scholarship, (421)

INSTITUTION OF PRODUCTION ENGINEERS:
Cemented Carbides, H. Burden, (19)
Labour in Wartime, (40)

INSTITUTION OF RAILWAY SIGNAL ENGINEERS:
Annual Meeting, (250)

INSTITUTION OF STRUCTURAL ENGINEERS:
Bronze Medal Award, (392)
Luncheon, 289
Strength of Steel-framed Buildings, 345

SOCIETY, BIRMINGHAM METALLURGICAL:
Presidential Address, C. H. H. Franklin, 171, 264: (Letter, 243)

SOCIETY, CHEMICAL:
Armstrong Memorial Lecture, 89

SOCIETY, ELECTROCHEMICAL:
Surface Hardening by Induction, H. B. Osborn, 372

SOCIETY, ILLUMINATING ENGINEERING:
Industrial Lighting in Wartime, H. C. Watson, (88)

SOCIETY, LIVERPOOL ENGINEERING:
Mechanical Properties of Materials and Failure in Service, L. W. Schuster, 389

SOCIETY, NEWCOMEN:
Summer Meeting, (360), 406
Use of Cast Iron in Building, S. B. Hamilton, 277

SOCIETY, PHYSICAL:
Duddell and Chree Medals, 1

SOCIETY, ROYAL:
Fatigue Following Highly Skilled Work, F. C. Bartlett (Ferrier Lecture), 373

SOCIETY, ROYAL EMPIRE:
Merchant Navy at War, R. Cross, 89

SOCIETY, WOMEN'S ENGINEERING:
Scholarship, Amy Johnson Memorial, (177)

SOCIETY OF ARTS, ROYAL:
Albert Gold Medal Presented to President Roosevelt, (360)
Goods Transport by Road, J. S. Nicholl, (122)

SOCIETY OF ARTS, ROYAL SCOTTISH:
Future of Transport, G. Mills (Keith Lecture), 155

SOCIETY OF AUTOMOTIVE ENGINEERS, AMERICAN:
Cylinder Bores, (20)

SOCIETY OF BRITISH AIRCRAFT CONSTRUCTORS:
Bruce-Gardner, Sir Charles, 187

SOCIETY OF MECHANICAL ENGINEERS, AMERICAN:
Gas-turbine Locomotive, 105
Relative Engine Efficiencies, G. B. Warren and P. H. Knowlton, 102
Stainless Steel, Tests for, (296)
Steam Engine and Boiler, A. New, S. L. G. Knox and J. I. Yellott, 197
Wood Briquetting Machine, R. T. Bowling, 182

SOCIETY OF NAVAL ARCHITECTS:
Power-torque Meter, New Type of, W. C. Hall, 119

SOCIETY FOR TESTING MATERIALS, AMERICAN:
Work and Programme, (118)

B

BACTERIA Bed Experiments, (154)
Bain, Alexander, Electric Clock Centenary, (122)
Balancing Machine, Improved Dynamic, W. and T. Avery, Ltd., 199
Ball Bearings, Monel, (282)
Ball and Roller Bearings, Control of (No. 1) Order, (327)
Band Conveyors, Aerial Ropeway and, at a Brickworks, Mavor and Coulson, Ltd., and R. White and Sons, 293
Barston Sewage Works, Solihull, Treatment at, 180
Barytes in Canada, (296)
Base Metals, Exploiting South African, 184
Bauxite, Brazilian, (312)
Bauxite from British Guiana, (202)
Bauxite in India, (121)
Bauxite from Island of Bintan, (328)
Bayonets, Sand-blasting, (344)
Bentonite-Colloidal Clay, (218)
Bequests to Science, &c. (What is Charity?), 195
Beryllium, South African, (217)
Birmingham University, Fellowship in Chemistry, (154)
Birthday Honours, 393
Black Coats and Overalls, 336
Board of Trade, Transport Officers to Assist Exporters, 283
Boasting, Propaganda by, 79, 98, 115

BOILERS:
Boyer's Patent Boiler, 77
Lagrafel-d'Allest Boiler, 90
Oil-fired Marine Boilers, 45
Oriolle Boilers for Torpedo Boats, 90
Steam Engine and Boiler, A New, S. L. G. Knox and J. I. Yellott, 197

Book Reviews—*see* Literature
Books of Reference—*see* Literature
Bottle-necks in Production, Avoidance of, 165
"Bradleyite," New Mineral, (415)
Brass Plating Process, (40)
Bricks, Standardisation of, 377

BRIDGES:
Aberdeen, King George VI Bridge, (186)
American Railway Bridges, (250)
Beautiful Steel Bridges, (408)
"Butterley" Standard Bridge, 356
Chien Tang River, Railway Bridge, (40)
Deer Isle Bridge, 117
Delaware River Bridge, (360)
Dubuisson, Quebec, Highway Bridge, (202)
Eala Viaduct, Spain, 5
Golden Gate Bridge Net, (234)
Housatonic River, U.S.A., Novel Bridge Piers, 133
Howrah Bridge, Calcutta, 5, 134
Inland Waterway Canal, Double-leaf Swing Bridge, 399
Jamalpur Bridge, India, (344)
Lachine Canal Bridge, C.N.R., (250)
Madison, Wisconsin, Laminated Bridge Arch, (154)
Manchukuo Railway Bridge, (424)
Pit River Bridge, (360)
Potomac Bridge, (170)
Rainbow Bridge, Niagara River, (186)
Rigid Frame Bridges in America, 39
Roads and Bridges in 1940, 5
Storey Bridge, Queensland, Lighting, (88)
Suspension Bridges, Stabilisation of, 116
Suspension Bridges, Stability of, 400
Tacoma Suspension Bridge, Washington, 6
Thousand Islands Bridge, 116
Villeneuve St. Georges Bridge, River Seine, 5
Waterloo Bridge, 5
Whitestone Bridge, 116
Yonge Street Highway Bridge, Canadian National Railways, (20)
Youghal Bridge, Cork, (218)

Brinell Hardness Tester for Plates, Detroit Testing Machine Co., (186)
Brinell Microscope, A. C. Wickman, Ltd., 153
"Britannia," Alexander Duckham and Co., Ltd., 265
British Ropes, Ltd., "Rope Talks" (408)

BRITISH STANDARDS INSTITUTION:
Annual Meeting (312)
British Standards Institution in Wartime, 287
Spanish and Turkish Technical Handbooks, (319)
Specifications:
Arc Welding as Applied to Tubular Steel Structural Members, 201
Boilers, Locomotive Type Multitubular, 201
Brass Gravity Die Castings, 87
Brass Tubes and Screwed Glands for Condensers, 201
Cast Brass Bars and Forgings, 343
Circuit Breakers, Industrial, 343
Electric Traction Machines, 399
Engineers' Squares, 137
Flameproof Enclosure of Electrical Apparatus, 87
Headlamp Masks for Motor Vehicles, 137
Incendiary Bombs, Devices for the Detection of, 233
Industrial Circuit Breakers, 343
Locomotive Type Multitubular Boilers, 201
Naval Brass Die Castings and Brass Gravity Die Castings, 87
Phosphor-bronze and Phosphorus Deoxidised Bronze Tubes, 201
Slip Gauges, Supply of, during the War, 343
Vulcanised Fibre Rods and Tubes, 201
British Supply Council in North America, 41
British Timken, Ltd., Bearings Production, (311)
Brush Surface Analyser, A. C. Wickman, Ltd., 231
Building and Civil Engineering Industries, Essential Work Order, 393
Building Developments, American, 319
Building Firms, Registration of, 409
Building Industry, Wartime, 403
Building, Non-stop, 144
Building Operations and Works of Engineering Construction (Welfare and Safety Provisions) Order, 89
Building Regulations, Wartime, 297
Building Trade, Labour and the, (376)
Building, The Use of Cast Iron in, S. B. Hamilton, 277
Buildings, Steel-framed, Strength of, 345
Business Men and Civil Servants, 146; (Letter, 164)

C

CABLEWAY, Large, in Sweden, (122)
Cableways, Aerial, in East Africa, (282), (360)
"Caffelite" Plastic, (218)
Calcium in the Metallurgical Industry, (282)
Calendars and Diaries, 19
Calorific Value of Gas, Standardisation of, 422
Camera, Moticn Picture, for Engineering Research, W. Vinten, Ltd., 193
Camp Construction in America, (339)
Can, The Flattened, (376)
Canada's War Effort, Research Aids, 240
Canada's War Industry, 73
Canadian Magnesium Industry, (270)
Canadian Nickel Output, (85)
Canadian Paints and Varnishes, (376)

CANALS:
British Canal Industry, J. Miller, 283
Canal Boatmen, Training of, (282)
Canal Transport, 304
Canals in Wartime, 123, 219

CANALS (*continued*):
Cape Cod Canal, Lighting, (122)
German Canal Expansion Plans, (218)
Harbours and Waterways in 1940, 43, 66
Madera Canal, (328)
Manchester Ship Canal Company, Annual Meeting, 155
Panama Canal Locks, (20), 66
Panama Canal Traffic, (282)
Panama Contractors, Inc., Dredging Combine, (424)
St. Lawrence Waterway Project, 66, (186), (296)
Texas Waterways, 66
Tokio and Yokohama Canal, Proposed, 67
Upper Mississippi Canalisation, 66
Volga and Baltic Canal, (282)

Carbides, Cemented, H. Burden, (19)
Carborundum Jubilee, (342)
Carillon, Welded Steel-framed, Lincoln Electric Co., Ltd., 200
Caspian, Oil under the, (56), (392)
Catalogues, 282, 344
Cement, Blast-furnace, (234)
Cement Industry, P. Malcolm Stewart, 251
Cement Plant for Irak, (344)
Cement Production Committee, 41, 393
Cement Transporting Car, American Car and Foundry Co., (234)
Cement, Use of, Building Research Station, (40)
Cemented Carbides, H. Burden, (19)
Centerless Arch Design (Wartime Building Bulletin No. 14), 249
Charcoal for Gas Masks, (186)
Charity, What is? 195
Chemical Engineers for Palestine, (408)
"Chemigum" Synthetic Rubber for Tyres, Goodyear Tyre and Rubber Co., (55)
Chicago, South-West, Sewage Plant, 200
China Clay in India, (344)
China Clay Shipments to America, (424)
China's Industry, War and, (218)
Chrome in Newfoundland, (312)
Chrome Ore, Monograph on, (72)
Chromite in Turkey, (234)
Civil Engineering and Building Industries, Essential Work Order, 393
Civil Servants, Business Men and, 146; (Letter, 164)
Clad Metals, (392)
Clay Conveying Plant, Mavor and Coulson, Ltd., 245
Closing Redundant Factories, 155

COAL AND COKE:
Coal Production, Increased, 409
Coal Mining an Essential Work Industry, 329
Coke for American Steel Works, (294)
Coke, High-grade, from Low-grade Coal, (344)
Coking Process, Shawinigan Chemicals, Ltd., (88)
Control of Coal Industry, 251
Karaganda Coal, (390)
Russian Coal Deposits, (51)
Russian Coal Industry, (408)
Swedish Coal Shortage, (138)
Swiss Coal Discovery, (20)
Underground Gasification of Coal in U.S.S.R., 183
Wages in the Coal Industry, (408)
Whitehaven Colliery Explosion, 361

Coating Machine for Sensitised Paper, T. H. Dixon and Co., Ltd., 193
Cobalt, American, (328)
Coffee Plastic ("Caffelite"), (218)
Committee, Advisory, of Engineers, 294; (Leading Article, 304)

CONCRETE:
Concrete for Building, A. Lindsay Forster, 49
Houses, All-concrete, 267
Pitheads of Concrete, T. P. Stratten, (324)
Stress Distribution in Reinforced Concrete Arches, R. H. Evans, 301
Trolley Poles, Concrete, (408)

Condenser, Ejector, Alexander Morton and, R. Bruce, 126
Condensing Plant and Cooling Water Systems, The Design of, W. T. Bottomley, 404, 418; (Leading Article, 400)
Contract Terms in Common Use (Select Committee on National Expenditure), 167
Contractors' Plant Association, Formation, 361
Control of Prices, 377
Conveying Plant for Clay, Mavor and Coulson, Ltd., 245
Conveyor for Ore, (218)
Conveyors, Band, Aerial Ropeway and, at a Brickworks, Mavor and Coulson and R. White and Sons, 293
Cooling Water Systems, Condensing Plant and, The Design of, W. T. Bottomley, 404, 418; (Leading Article, 400)
Copper, American, (408)
Copper Belt of Northern Rhodesia, 310
Copper from the Congo, (98)
Copper Deposits in Bulgaria, (154)
Copper Sulphate in Dutch East Indies, (170)
Copper Supplies, American, (72)
Copper in Sweden, (360)
Cordoba Flour Mill, Argentina, (328)
Cork Insulation for Machine Bases, 275
Corrosion of Aircraft Metals, (20)
Corundum Industry, South African, (186)
Cotton Cake for Fuel, (106)
Cotton Waste Order, (72)
Crystal Palace Towers, Demolition of, 267
Cyclotron for Calcutta, (344)

D

DAMS:
Box Butte Irrigation Dam, Nebraska, (154)
Grand Coulee Dam and Power-house, 203, 207, 221, (312)
Gyobu Dam, Rangoon Water Supply, 23 (*Supplement, January 3rd*, 1941)
Kromme River Dam, South Africa, 24
Merriman Dam, U.S.A., 24 (*Supplement, January 3rd*, 1941)

DAMS (*continued*):
Nile Barrages, Rosetta and Damietta, 24
Norfolk Flood Dam, Arkansas, (328)
Oil Burners for Drying Dam Core, (312)
Ross Dam, U.S.A., 74, 92
St. Saviour's Dam, Guernsey, 23 (*Supplement, January 3rd*, 1941)
Watts Bar Dam Lock, Tennessee River, (376)
White River Dam, Washington, Protection for, (186)

Dalton Relics Found in Manchester, (186)
Dalton's Scientific Apparatus Destroyed, (72)
Damping Capacity of Steel and its Measurement, G. P. Contractor and F. C. Thompson, 388; (Leading Article, 384)
"Defibrator" Method of Alcohol from Wood, (106)
Delaware River, Channel Deepening, (289)
Desert Warfare, The Engineer and, 130
Deterioration of Structures in Sea Water (Inst. C.E., Eighteenth Report), 204
Dextrine, Potato, 411
Diamond Wire-drawing Dies (No. 1) Order, (20)
Diamonds, Industrial, (40)
Diaries, Calendars, &c., 19
Dispersal, 352
Dividing Head, Edgwick Optical, Alfred Herbert, Ltd., 36

DOCKS AND HARBOURS:
Alexandretta Harbour, (360)
American Naval Bases, 66
American Navy Dry Docks, 66
Beira Port Works, 44
Birsfelden, Near Basle, New Rhine Port, (72)
Bremen and Wilhelmshaven (Air Raid Damage in Germany), 262
Bremerhaven and Bremen's Dock System, 179
Bremerhaven and North German Seaports, 223
Bristol Channel Port Director, (138)
Cape Town Harbour, 44
Deschimag Harbour, 179
Dusseldorf and Neuss, Ports of, 306
Glasgow Dock Labour, 251
Harbours and Waterways in 1940, 43, 66
Leningrad Harbour, (360)
Lighting at Ports, (266)
Mannheim Harbour, 110
Merseyside, Manchester and Preston Areas, Dock Labour in, 155
Mobile, Alabama, Harbour Works, 319
New York Harbour, 66
Port of London Authority, Lord Ritchie's Retirement, 235
Rosario Port, (170)
St. John, N.B., Harbour Additions, (312)
Sydney Dry Dock, 67
Table Bay Harbour Record, 311

Documentary Films to Promote Exports, 139
Drawings, Old Linen, Appeal for, (40), (218)
Dynamic Balancing Machine, Improved, W. and T. Avery, Ltd., 199
Dynamics of Civilisation, 243

E

EARTHQUAKE Resistant Tower, Stanford University, 273
Economic Production, Other Factors of, R. L. Tandy, 32; (Letters, 49, 65)
Economic War and the Engineering Industry, A. M. de Neuman, 2
Edgwick Optical Dividing Head, Alfred Herbert, Ltd., 36
Education, Technical, 409
Efficiency, An Accident and, 55
Ejector Condenser, Alexander Morton and the, R. Bruce, 126

ELECTRICAL MATTERS:
Analyser, Surface, A. C. Wickman, Ltd., 231
Bain, Alexander, Electric Clock Centenary, (122)
Brazil's Industrial Electrification, (250)
B.E.A.M.A. Annual Report, 251, 291
Bunnerong, 50,000-kW Turbo-alternator for, C. A. Parsons and Co., Ltd., 285, 299, 316
Cable Jointing, Vulcaniser for, Harvey Frost and Co., Ltd., 85
Charges, Electricity, 377
Chemical Control, Light for, Crompton-Parkinson, Ltd., (328)
Coming Crisis in Electrical Power Transmission, H. Rissik, 348, 364; (Letters, 402)
Delray Power Station Extensions, Detroit Edison Co., 152
"Diesel-Line" Electric Locomotive, L.P.T.B., 309
Electrical Engineering in 1940, 16, 27, 50, 60
Electricity Undertakings and War Conditions, 409
Explosion on Cable Caused by Verdigris, (56)
Faraday Medal Award, A. P. M. Fleming, 89, 313
Fire Alarm, High-speed, for Detecting Incendiary Bombs, Londex Ltd., 225
Fluorescent Discharge Tubes, Portable Unit tor, Edison Swan Electric Co., Ltd., 295
Fluorescent Tubular Lamps, Crompton-Parkinson, Ltd., (328)
Flux Distribution and Armature Reaction in D.C. Interpole Machines, R. Pohl, 83
Furnaces, Electric, in 1940, 60
Fuses with Striker Pin Tripping Devices, Johnson and Phillips, Ltd., 230
Galvanometer Scale Unit, Compact, 135
Glass Insulation for Electrical Windings, C. D. Jamieson, 38
Hamburg's Electricity Supply, 386
Insulation, Woven Glass, for Electrical Windings, C. D. Jamieson, 38
Kitchen, Portable Electric, (282)
Klip Power Station, Victoria Falls Power Company, 18
Lamp, Fluorescent 80-Watt, British Thomson-Houston Co., Ltd., 230
Lead Sheathing Cable, (154)
Lighting in 1940, 61
Lighting, Factory, in Wartime, Metropolitan-Vickers Electrical Co., Ltd., 37
Lighting, Street, and Overhead Wires, (424)
Machine Tools, Electrical Equipment for, (312)
Magnets, Big, American Rolling Mill Co., (106)
Motors, Alternators, &c., in 1940, 17
Overhead Wires and Street Lighting, (424)
Paper for Electrical Insulation, General Electric Co. of America, (266)
Petersen Coil Design, Oerlikon Co., 68
Port Macquarie Power Station, Australia, (111)
"Portalux" Portable Unit for Fluorescent Discharge Tubes, Edison Swan Electric Co., Ltd., 295
Power Station, Floating, A. P. Kellogg, (234)
Power Transmission, Electrical, The Coming Crisis in, H. Rissik, 348, 364; (Letters, 402)
Power Trends, Present-day, A. G. Christie, 419
Rectifier Equipment, Portable, Hewittic Electric Co., 120
Rectifier Equipments, Efficiency Measurements of, J. C. Read, 142, (180)
Rectifiers, Mercury Arc, 50
Rhodesian Demand for Electricity, 47
Royal Air Force Electricians, (328)
Scottish Power Co., Annual Meeting, 187
Soot Blowers, Automatic Electrically Controlled, Hopkinsons, Ltd., 374
South African Electrical Supply Regulations, (20)
South African Electricity Expansion, 129
Surface Hardening by Induction, H. B. Osborn, 372
Switchgear in 1940, 17, 27
Testing Equipment, Portable High-voltage, Ferranti Ltd., 62
Transformers in 1940, 27
Transformers, Low-voltage, for A.R.P. Shelters, Reyrolle and Co., Ltd., 86
Trolleybus Motors, Recent Developments in, 67
Turbo-alternator, 50,000-kW, for Bunnerong, C. A. Parsons and Co., Ltd., 285, 299, 316
Turbo-alternators in 1940, 27
Turbo-generator Work in 1940, 16
Vehicle, Electric Battery, J. Steele, 335
Victoria Falls Power Co., Klip Station, 18
Voltage Regulators, Automatic, 50
Vulcaniser for Cable Jointing, Harvey Frost and Co., Ltd., 85

Elevators, Argentine, (312)
Emergency Construction, Director of, K. C. Appleyard, 107
Employment Returns, Ministry of Labour, 41, 107, 171, 251, 345, 393
Engineer, Adventures of an, W. J. E. Binnie, 317
Engineer and Desert Warfare, 130
Engineering—75th Anniversary, 21
Engineering Economics and Æsthetics, 421
Engineering Industry, Economic War and the, A. M. de Neuman, 2
Engineering and the Photographic Industry, 192
Engineering Students' Conference, (217)
Engineering Training for Women, (186)
Engineers, Advisory Committee of, 294; (Leading Article, 304)
Engineers' Club, Manchester, Annual Meeting, (224)
Engineers and the Future, S. G. Newstead, 115, 148
Engineers, Government by, 416
Engineers and Scientists, 414
Engineers and the War, 243

ENGINES:
Anti-freeze Liquids, Types I and II, (234)
Boulton and Watt Deptford Engines for Scrap, 57, (138); (Letter, 66)
Gaskets, New Material for, (9)
Kadenacy High-duty Moderate-speed Experimental Unit, S. J. Davies, 238
Marine Engineering, Progress in, S. F. Dorey, (Lowe Gray Lecture), 76, 90
Marine Oil Engine Progress, 46
McNaughted Engines, R. H. Parsons, 66
Morris Vedette Engines for Ships, (138)
Oil Engine, Six-cylinder 540 B.H.P. Marine, Mirrlees, Bickerton and Day, Ltd., 34
Oil Engine-driven Traction Engine, J. and H. McLaren, Ltd., 279
Petrol Engines, Town's Gas Fuel for, 12, 49, 79, 98, 115
Relative Engine Efficiencies Realisable from Steam Turbine Generator Units, G. B. Warren and P. H. Knowlton, 102
Sludge as Engine Fuel, R. E. Fuhrman, (250)
Steam Engine and Boiler, A. New, S. L. G. Knox and J. I. Yellott, 197
Vegetable Oils as Fuel for C.I. Engines, (344)

Epicyclic Gear Trains, H. E. Merritt, 190, 213, (224)
Equality of Opportunity, 114; (Letter, 147)
Essential Work (Building and Civil Engineering) Order, 1941, 393
Etching Metal Sections, Jacquet's Method, (312)
Excess Profits Tax, Engineering Firms and, Hadfields, Ltd., 219

EXHIBITIONS:
Glass Protection Exhibition, (341)
Railways Exhibition Coach, (424)

Experientia Docet, 30
Expenditure, National, Select Committee on, 62; (Leading Article, 64); 112, 128, 167, 319, 345; (Leading Article, 114); (Letters, 133, 196)
Explosives, (392)
Explosives, G. I. Finch, 340
Export and Industrial Council, 187
Export Trade with America, 235
Exports of Specialised Manufactures, Financing, W. W. Syrett, 371

F

FACTORIES, Closing Redundant, 155
Factories, Single-storey (Wartime Building Bulletin, No. 15), 403
Factories, Wages and Welfare in, 89
Factory Accidents, Inspector's Report, 139, (202)
Factory Lighting in Wartime, Metropolitan-Vickers Electrical Co., Ltd., 37
Factory and Storage Premises, Controller-General of, 235
Facts About the Rifle, D. Weir, 314, 330: (Letters, 370, 401)
Farm Implement Control, David Brown Tractors, Ltd., 33
Fatigue Following Highly Skilled Work, F. C. Bartlett, 373
Federation of British Industries, Industry's Task in the New Year, 1; Annual Meeting, (241)
Fen Floods, (218)
Fertilisers, Wartime, (106)
File, "Rindis" Rotary, Lorant and Co., Ltd., (138)
Files, Renovating Used, Az-New File Co., (166)
Films, Documentary, to Promote Exports, 139
Filtering Media, F. J. van Antwerpen, (117)
Financing Exports of Specialised Manufactures, W. W. Syrett, 371
Finland Nickel, (328)
Fire Alarm, High-speed, for Detecting Incendiary Bombs, Londex Ltd., 225
Fire Prevention Executive, 21
Fire Prevention Order, 203
Fires in Warehouses and Stores, (40)
Flame Gases, Temperature and Latent Energy in, W. T. David, 268
Flood Protection, Great Ouse, Sir Murdoch MacDonald and Partners, 159, 174
Fog Dissipation, (218)
Forthcoming Engagements—*Weekly*
Foundry Sand, (397)
Fruit Fumigation Plant in Egypt, (56)

FURNACES:
Blast-furnace Cement, (234)
Blast-furnace, Ten-year Continuous Run, Otis Steel Co., (20)
Electric Furnaces in 1940, 60
Electric Melting Furnaces, (138)
Gas-fired Heat Treatment Plant, Incandescent Heat Co., Ltd., 247
Gas Furnaces, The Working of, During an Alert, 148
Hydro-electric Blast-furnace, (56)
Ventilation of Furnace Anti-glare Schemes, 387
Wild-Barfield Electric Furnaces, Ltd., Works, 151

G

GALVANOMETER Scale Unit, Compact, 135
Gardner Self-cleaning Strainer, Alley and MacLellan, Ltd., 198
Gas Research Board, 161
Gas, "Sour," Arkansas Power and Light Co., (360)
Gas, Standardisation of the Declared Calorific Value of, 422
Gaskets, New Material for, (9)
Gauges, The Life of, C. A. Robb, (408)
Gear Trains, Epicyclic, H. E. Merritt, 190, 213, (224)
German Engineering Co-ordination, (138)
German Magnesium Production, (424)
German Patents, Royalties on, 267
Giles, William, Fellowship in Science, (218)
Glasgow Bus Garage Equipment, (56)
Glass Bulbs, (170)
Glass as an Insulation Medium, (88)
Glass, Optical, Australian Manufacture, (202)
Glucose, Potato, 412
"Go-as-you-Please" Technology, 177, 211, 212, 414
Gold, Crystalline, 184
Gold in Mysore, (360)
Government by Engineers, 416
Government Trading in War (Select Committee on National Expenditure), 62; (Leading Article, 64), 112, 128; (Leading Article, 114); (Letters, 133, 196); 167, 319, 345
"Grainal" Alloys, (186)
Gun, American Anti-aircraft, (56)
Guns for Aeroplanes, Windsor, Ontario, Plant, (392)
Guy Motors, Ltd., Works Artificial Sunlight Treatment, 398

H

HABBANIYAH Flood Relief Scheme, 23
Hadfield, Sir Robert, Bequests, 139
Hadfields, Ltd., Engineering Firms and Excess Profits Tax, 219
Haigh Fatigue Testing Machine, The Action of the, E. Warlow-Davies, 350
Hamburg (R.A.F. Targets), 385
Hardening, Surface, by Induction, H. B. Osborn, 372
Heat-treatment Plant, Gas-fired, Incandescent Heat Co., Ltd., 247
Heating Appliances Export Group, (154)
Helmets, Steel, Civilian Type, 107
Home Guard and Factory Defence Matters, 423
Hong Kong Centenary and Applied Science, C. A. Middleton-Smith, 99, 108, 124, 140, 156; (Leading Article, 162)
Honours, Birthday, 393
Honours, New Year, 18, (31)
Hose, Monster Flexible, Boston Woven Hose and Rubber Co., (20)
Hot Tinning, C. E. Homer, 113
Humphreys, Col. C. L. Howard, Appointed Director of Works, 1
Hydrogenation and War, A. E. Williams, 58

HYDRO-ELECTRIC:
American Water Power Statistics, (424)
Blast-furnace, Proposed Hydro-electric, (56)
Canadian Hydro-electric Progress, 1940, (106)
Canadian Water Power Resources, (312)
Chats Falls Power Station, Ontario, Dismantling 28,000 H.P. Turbines, 241
Colorado River Power Scheme, (424)
Glen Affric Power Scheme, 361, 409
Grand Coulee Dam and Power-house, 203, 207, 221, (312)
Highlands Water Power Schemes, 361, 409
Latvian Power Plant at Kegums, (186), 217
Niagara Falls Power Development, (218)
Sabie Hydro-electric Plant, Transvaal, 47
Swedish Water Power, (202), (355), (376)
Victoria Falls Power Company, 18

I

ICE Flakes, Preservation of, V. T. Schaefet (360)
Imperial Chemical Industries, Ltd., Annual Report, 329
Imperial Institute Report, 107
Import and Production Executives, 21
Indian Industrial Research, (153)
Indian Mechanics, Training, 1
Indian Ordnance Works, (343)
Indian Vegetable Oils as Fuel for C.I. Engines, (344)
Indium-sulphate Plating Bath, (312)
Induction, Surface Hardening by, H. B. Osborn, 372
Industrial and Export Council, 187
Industrial Progress, Whither and Why, C. H. D Franklin, 264
Industrial Registration, 96
Industrial Research, American, 326
Industries, New South African, 310
Industry, Mobilisation of, for the Purposes of War, D. A. Bremner (B.E.A.), 22; (Leading Article, 30)
Industry's Task in the New Year, Lord Dudley Gordon (F.B.I.), 1
Insulation, Cork, for Machine Bases, 275
Inventions and Patents, 417
Inventors, Lay, 336
Iowa Institute of Hydraulic Research, Turbine History Collection, (360)
Iraq Cement Works Plant, (344)
Iraq Petroleum Concession, (296)
Ireland, Northern, Nucleus Industries in, 203

IRON AND STEEL:
American Scrap, Controlled Prices, (202)
American Steel Works Expansion, 399
Angular Chilled Iron Grit, (202)
Atmospheric Exposure Tests on Copper-bearing and other Irons and Steels in the United States, E. S. Taylerson, 308
Borneo Iron Deposits, (328)
Canadian Iron Ore, (392)
Canadian Steel Standards, (170)
Canadian Steel Statistics, (375)
Cast Iron Pipes, Protecting, (106)
Cast Iron, The Use of, in Building, S. B. Hamilton, 277
Cr-V Steel, Arc Welding, (106)
Damping Capacity of Steel and its Measurement, G. P. Contractor and F. C. Thompson, 388; (Leading Article, 384)
"Ferri-sul" Pickling Agent for Stainless Steel, L. F. Loutrel, (218)
Fire Protection of Structural Steel Work, Wartime Building Bulletin, 229
Goring Steel Works, Output of, H. A. Brassert and Co., Ltd., 66
"Grainal" Alloys, (186)
Indian Ban on Iron and Steel Imports, (72)
Iran Iron Industry, (121)
Iron in India, J. A. Dunn, (360)
Iron Plantations of Pennsylvania, 118
Iron from the Philippines, (359)
Iron and Steel in 1940, 10
Iscor Steel Works Production, 129
Macrome Treatment Plant Extensions, (296)
Mill, 100in. Plate, Steel Co. of Canada, Ltd., (408)
Protective Coatings for Steel Work, C. H. Ellaby, 303
Rumanian Iron Industry, (307)
Russian Iron and Steel Plants, (133), (275)
Scrap Survey, (72)
South Africa, Iron and Steel Industry in, 366
Spanish Iron Prodcution, (408)
Stainless Steel, Tests for, (296)
Steel Age, End of the, 368
Steel *v.* Copper Fire-boxes, W. Palmer, 370
Steel-framed Buildings, Strength of, 345
Steel Distribution Scheme, 422
Steel, Paper-thick, for Aircraft, (250)
Steel Tubes, Tapered, Republic Steel Corporation, (282)
Switzerland's Iron Shortage, (72)
Tool Steel, Standardised, (344)

Italian Alloys, (408)
Italian Potash, (170)
Italy's Search for Chemicals, (250)

J

JACQUET'S Method of Etching Metal Sections, (312)
Japan, Petroleum in, (266)
Japanese Industries, (138)
Jets, Liquid, of Annular Cross Section, A. M. Binnie and H. B. Squire, 236
Joffe, A. F., Awarded Order of Lenin, (106)
Joints, Riveted, Stresses in, J. D. W. Ball, 100

K

KALUZHSKOYE Chaussee, Moscow, New Building, (390)

L

LABOUR in 1940, 10
Labour, Ministry of, New Appointments, 377
Labour, Munitions, Supply Organisation, W. H. Denholm, 203, 209
Labour, New Sources of, 210
Labour Problems, Wartime, 219
Labour in Wartime, (40)
Latent Energy, Temperature and, in Flame Gases, W. T. David, 268
Lay Inventors, 336
Lead Sheathing Cable, (154)

LEADING ARTICLES :

Aircraft, Production and Acquisition of, 288
Apprentices, The Training of, 274 ; (Letter, 321)
Best Way, The One, 80
Black Coats and Overalls, 336
Bombing Raids, 226
Britain's Growing Air Power, 194
Business Men and Civil Servants, 146 ; (Letter, 164)
Canadian Lead (R.A.F. Technical Corps), 146
Canal Transport, 304
Condensing Plant, The Design of, 400
Council of Engineers, 304
Damping Capacity of Metals, 384
Desert Warfare, The Engineer and, 130
Dispersal, 352
Dive-bomber *versus* the Navy, 96
Equality of Opportunity, 114 ; (Letter, 147)
Experientia Docet, 30
Flying in Electric Storms, 258
Government Contracts, 114 ; (Letter, 133)
Government by Engineers, 416
High-flying Aircraft, 416
Hong Kong, 162
"Hood" and the "Bismarck," 353
Industrial Registration, 96
Inventors, Lay, 336
Ionian Sea, Battle of, 226
Labour, New Sources of, 210
Lubricants Problem of the Axis, 352 ; (Letter, 387)
Munitions, Cost of, 64
Navy at War, 178
Night Bomber, Destroying the, 368
Night Bombing, 320
Of Things, 162
One Best Way, 80
"Other Devices," 210
Post-war Problems, 80
Psychology of Discovery and Research, 64 ; (Letter, 98)
Radio in Wartime, 48
Retrospect—Total War ; Engineers and the War ; Night Bombing ; Labour ; Iron and Steel ; The Future ; Conclusion, 10, 11
Road and Rail Once More, 274
Science, Applied, and War, 242
Science and Secrecy (Parliamentary and Scientific Committee), 130 ; (Letter, 164)
Steel Age, The End of the, 368
Super-Summertime, 305 ; (Letter, 355)
Suspension Bridges, Stability of, 400
Transport, Co-ordination of, 242
Vested Interests, 258
War, After the, 48
War and Industry (B.E.A. Memorandum), 30
Young Offender, 320

LETTERS TO THE EDITOR :

"Accuracy," The Use of the Word, H. Walker, 164 ; J. F. Waters, 211
American Railroads, Finance of, E. H. Livesay, 49
Apprenticeship, G. F. Johnson, 321
Bombs, A Little Sum in, "Sceptic," 49
Business Men and Civil Service, S. G. Throssell, 164
Concrete for Building, A. Lindsay Forster, 49
Dynamics of Civilisation, C. H. H. Franklin, 243
Economic Production, L. P. Lockwood, 49 ; J. B. Sansom, 65
Electrical Power Transmission, Coming Crisis in, C. J. O. Garrard, 402 ; H. Rissik, 403
Engineers and the Future, S. G. Newstead, 115 ; C. Fox, 148
Engineers and Scientists, "R.E.," 414
Engineers and the War, "Dick Tom," 243
Equality of Opportunity, "Brummagem," 147
"Go-as-you-Please" Technology, A. C. Vivian, 177 ; W. A. Tuplin, 211 ; H. O'Neill, 212 ; C. H. Helmer, 414
Goring Steel Works, Output of, H. A. Brassert and Co., 66
Locating Plugs, A. C. Whitehead, 31, 133 ; W. Harwood, 66 ; J. C. Dabbs, 98 ; H. W. Holbeche, 115
Locomotives, Early British (Links in the History of the Locomotive), C. F. Dendy Marshall, 402
London's War Weapons Week, G. H. Wilkinson, 305
McNaughted Engines, R. H. Parsons, 66
Nicholson Siphon, E. A. Robinson, 164
Patents, Enemy-owned, "Chapag," 196
Peace Aims, Ernest Benn, 131 ; M. Benkert, 132 ; R. Kennedy, 164 ; "Technico," 195
Prepare Now, A. Moir, 415
Profits Tax, "An Employer," 196
Propaganda by Boasting, E. C. Smith, 31, 115 ; J. W. French, 79
Psychology of Discovery and Research, C. S. Myers, 98
Refloating Sunken Ships, R. Ryves, 163 ; G. E. Shaw, 196
Rifle, Facts About the, J. T. Evans, 370 ; D. Weir, 401
Salary of Engineers in Government Service, D. A. Russell, 354 ; "W. B.," and W. N. Hallett, 387
Science and Secrecy, J. D. Troup, 164
Shells, Machining H.E., "M.I. Mech. E.," 196, 243 ; "Another M.I. Mech. E.," 227
Ships, Refloating Sunken, R. Ryves, 163 ; G. E. Shaw, 196
Southern Railway "Pacific," E. H. Livesay, 354
Steel *v.* Copper Fire-boxes, W. Palmer, 370
Super-Summertime, R. D. Parker, 355
Terms, New Engineering, C. Turnbull, 243

LETTERS TO THE EDITOR (*continued*) :

Town's Gas Fuel for Petrol Engines, "Inquirer," 12, 79, 115 ; J. Jones, 49, 115 ; "Third Party," 98
Turbines and Pumps, Dimensionless Characteristics of, J. Jennings, 12
Waiting Time, A. C. Whitehead, 370
War Aims, H. T. Hildage, 78 ; "Observer," 98
War Contracts, Costs and, W. N. Hallett, 133
Welfare Workers for Industry, Supply of, R. R. Hyde, 275
"Woolindras" Process, B. H. Wilsdon, 264

Lenin, Order of, Awarded to A. F. Joffe, (106)
Leverhulme Research Fellowship, (106)
Lignite for Producer Gas Vehicles in Russia, (72)
Lignite, The Utilisation of, (170)
Linen Drawings, Appeal for, (40), (218)
Liquid Air Process, P. L. Kapitza, (40)
Liquid Jets of Annular Cross Section, A. M. Binnie and H. B. Squire, 236

LITERATURE :

Reviews :

"Battle of Britain," 272
Bomber, Defeating the, H. E. Wimperis, 355
"Britannia," A. Duckham and Co., Ltd., 265
Canning Practice and Control, O. Jones, 401
Construction Planning and Plant, A. J. Ackerman and C. H. Locher, 401
Engineering Economics, T. H. Burnham and G. O. Hoskins, 227
Fault Currents in Electrical Networks, Calculation of, R. T. Lythall, 46
High-speed Compression-ignition Engine, C. B. Dicksee, 243
Jane's Fighting Ships, 1940, 176
Remove the Shackles, A. G. McGregor, 12
Steam Power Stations, G. A. Gaffert, 369
Works Organisation and Management, E. J. Larkin, 321

Short Notices :

Engineering Inspection, A. C. Parkman, 212
Engineering Workshop Manual, E. Pull, 212
Gears and Gear Cutting, F. J. Camm, 305
Hydraulic Measurements, H. Addison, 305
Iron and Steel Industry, G. Brown and A. L. Orford, 305
Physical Science in Art and Industry, E. G. Richardson, 115
Plastics in Industry, "Plastes," 212
Political Method, Sir E. Benn, (193)
Sirhowy Valley and its Railways, D. S. Barrie and C. E. Lee, 227
Spectrochemical Analysis, Bibliography of, D. M. Smith, 47

Books Received :

82, 287, 305, 333, 417

Books of Reference :

Blue Book, 1941, 375
Electrical Engineer's Companion, London Electric Wire Co. and Smiths, Ltd., (307)
Electrical Year Book, 1941, 375
Mechanical World Year Book, 1941, 265
Mining Year Book, 1941, 375
Practical Engineer Pocket Book and Diary, 1941, 265
Raid Spotters' Pocket Book, (234)
Railway Year Book, 1940–41, 29
Shipowners, Shipbuilders and Marine Engineers, Directory of, 375

Lithium Developments in America, (250)
Locating Plugs, 31, 66, 98, 115, 133
Logarithmic Chart Paper, Two Aids to the Use of, A. W. Swan, 290
London Chamber of Commerce, Presidential Address, Sir G. O. Clarke, 345
London County Council, Town Planning and Post-war Reconstruction, 409

LONDON PASSENGER TRANSPORT BOARD :

"Diesel-Line" Electric Locomotive, 309
Highgate Tube Station Opened, (88)
Travel Information Bureaux, (186)

London, The Replanning of, L.C.C. Report, 235
London's War Weapons Week, 305
Loom, A Circular, S. A. Dynnik, (161)
Low-temperature Research, Significance of, F. Simon (Inst. Metals, May Lecture), 345
Lubricants Problem of the Axis, 352 ; (Letter, 387)
Lubricating Oil, Cleansing of, (229)
Lubricating Oil Plant, British American Oil Co., Ltd., (296)
Ludwigshafen-am-Rhein, R.A.F. Targets in Germany, 127

M

MACHINE TOOLS :

American Machine Tools, (97)
Dominions Machine Tool Expansion, (311)
Edgwick Optical Dividing Head, Alfred Herbert, Ltd., 36
Electrical Equipment for Machine Tools, (312)
India, Harihar, Machine Tool Factory, (360)
Milling Machine, Vertical (CVM 25), Kendall and Gent (1920), Ltd., 199
Nasmyth, James, as a Tool Maker, H. W. Dickinson, 337
Single-purpose Machine Tools, 29
Standards of Accuracy for Engine Lathes, (40)
Thread Grinder, A. C. Wickman, Ltd., 120
War and Tools, (122)

Machine Bases, Cork Insulation for, 275
Machine Scraping, Greater Accuracy in, H. G. Griffith, (56)
Magnesium Industry, Canadian, (270)
Magnesium from Magnesite, (424)
Magnesium, Production of, in America, 355
Magnesium Production, German, (424)
Magnets, Big, American Rolling Mill Co., (106)
Manchester, Engineers' Club, Annual Meeting, (224)
Manchester Testing House, (170)
Manchukuo Industrial Progress, (250)
Manchukuo, Oil in, (181)
Manganese, American Demand for, (392)
Manganese in Manchuria, (20), (280)
Mannheim, City and Port of, 110
Man Power, Trades Union Congress and, 89

MAPS :

Balkan Communications (Rumanian Oil Situation), 259
Blohm and Voss Shipyard, Hamburg, 385
Bremen Docks and Deschimag Shipyard, 180, 262
Bremerhaven and North German Seaports, 223
Brenner Railway, 94
Dusseldorf and Neuss, 306
Grand Coulee Dam, Washington, 207
Great Ouse Catchment Area, 159, 174
Hamburg, Electricity Supply, and Blohm and Voss Shipyard, 385
Hong Kong and Surroundings, 99, 109, 125
Hopewell Iron Plantation, Pennsylvania, 118
Ludwigshafen and Mannheim, 215
Mannheim, Sketch Map and Railway Connections, 110
Ploesti, Rumania, Sketch Map, 260
Rumanian Oil Situation—Balkan Communications, 259
Russian and Middle-Eastern Oilfields, 334, 413
Seattle and Skagit River (Ross Dam), 74
Water Power, World Sources of, 349
Wilhelmshaven, 262

Markets, Notes and News—*Weekly*
Masonry, Porous, (266)
Materials, Mechanical Properties of, and Failure in Service, L. W. Schuster, 389
Measuring Instrument, Close, (88)
Mechanical Mishaps, G. E. Windeler, 283
Mechanical Properties of Materials and Failure in Service, L. W. Schuster, 389
Mechanical Properties of Solids, E. N. da C. Andrade (Forrest Lecture), 294, 380, 394
Mechanics, Indian, Training, 1
Melbourne Tramway Converted to Motorbus System, (170)
Mercury, American Production of, (20), (266), (277)
Mercury, Supply of, (126)
Metal Sections, Jacquet's Method of Etching, (312)
Metal Templates, Sensitised, Metal Photo-Drafting Co., 54
Metallurgical Research in South Africa, 321
THE METALLURGIST—*see* Index, page xii
Meter, Power-torque, New Type of, W. C. Hall, 119
Methane Gas from Sewage, (72)
Methane as Motor Fuel, 396
Mica, Australian, (170)
Mica Production, (88)
Mica in Tanganyika, (148)
Microscope, Brinell, A. C. Wickman, Ltd., 153
Middle East, The Oil Situation in the, 333, (423)

MINES :

Alsatian Potash Mines, (170)
American Mineral Statistics, (408)
Argentine Mines, American Control of, (282)
Barbeton, Ohio, Limestone Mine, (250)
"Bradleyite," New Mineral, (415)
Brazil Mining and Metallurgical Council, (424)
Brazilian Mining Research, (154)
Canada's New Mining Record, (185)
Chromite in Turkey, (234)
Coal Mining an Essential Work Industry, 329
Copper Supplies, American, (72)
Cripple Creek Mines, U.S.A., Flood Drainage, (296)
Crystalline Gold, 184
Deeper Mining Problems in South Africa, W. Reid, 310
Drainage of Deep Mines, 319
Egyptian Minerals, (20)
Manganese in Manchuria, (20), (280)
Merioneth Copper and Manganese Mines, (24)
Mine Managers' Examination, (296)
Molybdenum from Sweden, (234)
Molybdenum-tungsten Mines in Russia, (234)
Peruvian Minerals, (40)
Petsamo Nickel Mines, (344)
Pitheads of Concrete, T. P. Stratten, (324)
Platinum in Alaska, (234)
Rock Bursts in Canadian Mining, (328)
Scholarships, Miners', (20)
Shaft-sinking Record on West Rand, (138)
Sink and Float Mining, (193)
Tungsten Discovery in America, (344)
Tungsten Ore Deposits, Canadian, (154)
Whitehaven Colliery Explosion, 361

Ministry of Labour, Employment Returns, 41, 107, 171, 251, 345, 393
Ministry of Labour, Leaflets on War Work and Training, (186) ; New Appointments, 377
Ministry of Supply, Diamond Wire-drawing Dies (No. 1) Order, (20) ; Cotton Waste Order, (72) ; Scrap Survey, (72), (122) ; Larger Timber Supplies, 73 ; Area Boards, (88) ; Salvage, (122), (202), 267, (424) ; Requisitioned Tin, (122) ; Export of Paint Materials, (218) ; Timber for Motor Vehicles, (266) ; Electrical Equipment for Machine Tools (312) ; Control of Ball and Roller Bearings (No. 1) Order, (327) ; Steel Distribution Scheme, 422
Ministry of War Transport, 313 ; Advisory Councils, (408)
Ministry of Works and Buildings, Appointments, 123, 155
Miscellanea—*Weekly*
Mobilisation of Industry for the Purposes of War, D. A. Bremner (B.E.A.), 22 ; (Leading Article, 30)
Moisture Detector, Battery-operated, (170)
Molybdenum Smelter, (20), (296)
Monel Ball Bearings, (282)
Monel for Boat Nails, (56)
Mongolia, Oil in, (170)
Mortars for Brickwork, Wartime Building Bulletin, 16, (424)
Morton, Alexander, and the Ejector Condenser, R. Bruce, 126
Moscow Soviet Palace, (154)
Munitions, Cost of, 64
Munitions Labour Supply Organisation, W. H. Denholm, 203, 209

MOTOR-CARS :

Accident and Efficiency, 55
American Ford Company, Statistics, (328)
Automobile Research, W. A. Tookey and E. Giffen, 361
Buses, One-man, in Buenos Aires, (56)
Colloidal Fuel, (122)
Cylinder Bores, (20)
Durban Motor-car Assembly Plant, (392)
Electric Battery Vehicle, J. Steele, 335
Gas Cylinder Regulations, (40)
Gas Filling Stations for Motor Transport, (12)
Gaskets, New Material for, (9)
Glasgow Corporation Garage, Bus-washing Equipment, (56)
Glass, Safety, for Car Windows, (282)
Highway Sorting Office Unit in U.S.A., (250)
Insurance of Road Vehicles, (392)
Lignite for Producer Gas Vehicles, (72)
Maintenance of Motor Transport, Committee, 139
Methane as Motor Fuel, 396
Mobile Gas Units, Export Prohibition, (170)
Motor Fuel Rationing Order, 1941, (351)
Motor Vehicle Registrations, (154)
Peat Fuel for Motor-cars, (344)
Producer Gas in Australia, (424)
Producer Gas for Heavy Vehicles, (234)
Producer Gas Problems, T. Tilling, Ltd., (170)
Producer Gas for Road Transport Vehicles (122), 123
Producer Gas in Sweden, (138), (328), (424)
Spare Parts, Transport Priority, (424)
Spares and Accessories, Advisory Committee on, (186)
Swedish Producer Gas Vehicles, (138), (328), (424)
Swiss Lorries on Wood Gas, (138)
Tank Tractors for Sewage Sludge, Allis-Chalmers Manufacturing Co., 232
Tar Oils as Motor Fuel, (29)
Timber for Motor Vehicles, (266)
Tractor, Rubber-tyred Industrial, Caterpillar Tractor Co., 200
Trolleybus Motors, Recent Developments in, 67

N

NAILS, Boat, Monel for, (56)
Nasmyth, James, as a Tool Maker, H. W. Dickinson, 337
National Expenditure, Select Committee on, (Supply Services Report), 62 ; (Leading Article, 64) ; Fourth Report, 112, 128 ; (Leading Article, 114) ; (Letters, 133, 196) ; Contract Terms in Common Use, 167 ; Twelfth Report, 319 ; Fourteenth Report (London Tube Shelter), 345
New Year Honours, 18, (31)
New York University, Research Laboratory Management Course, (169)
Newfoundland Chrome, (312)
Nickel in Finland, (328)
Nickel, Japanese Shortage of, (360)
Nickel Ores, Refining, (186)
Nickel Output, Canadian, (85)
Nile, Suspended Matter in the, 168
Non-dimensional Characteristic Design Factors for Turbo-machines, J. R. Finniecome, 276
North America, British Supply Council in, 41
Northern Ireland, Nucleus Industries in, 203
Nozzle and Blading Efficiency, Steam Turbine, F. Dollin, 53, 69
Nylon, Canadian, Canadian Industries, Ltd., (87)
Nylon Works, British Nylon Spinners, Ltd., (234)

O

OBITUARY :

Austin, Lord, 353 (Portrait)
Bertram, C. (106)
Brown, E. O. Forster, 354
Brown, F. E., 211
Brown, James, 65
Cadman, Lord, 369 (Portrait)
Callender, T. O. (328)
Coode, A. T., 31
Cullis, C. G., 289
Eastwood, H., (266)
Edwards, W. S., (56)
Ferguson, Robert, (202)
Fraser, Kenneth, 131
Gittins, G. E., 82
Given, R. D., 176
Gresley, Sir Nigel, 244 (Portrait), (296)
Haigh, B. P., 81 (Portrait)
Hall, Albert, 163 (Portrait)
Hampshcir, J. W., (71)
Hayes, Sir Bertram Fox, (344)
Hele-Shaw, H. S., 97 (Portrait)
Hill, T. U., (88)
Holt, Sir Richard, 203
Jeffries, C. W., (424)
Kaye, G. W. C., 267
Knight, W. C., (376)
Mauldin, Lieut.-Colonel H. H., 361
Morgan, W. T., (164)
Murray, Dr. Charles, (266)
Nock, W. H., (170)
Owen, Sir David, 329
Pollard, Frederick, (186)
Reveirs, George, 227 (Portrait)
Rhodin, J. G. A., 211
Richards, C. S., 97 (Portrait)
Robertson, Professor D., 46
Sharp, Pilot Officer G. G., (328)
Silley, J. H., 82 (Portrait)
Smail, D., (408)
Smith, Sir Allan, 147
Stamp, Lord, 275 (Portrait)
Stuart, R. F., (392)
Summerson, R. B., (56)
Taylor, E. Brough, 131
Trifitt, John, (376)

OBITUARY (*continued*):
Wakefield, Lord, 65
Walker, Miles, 82
Williams, Sir Thomas, 329, (344)
Williamson, Captain A., (56)
Ohio River Flood Wall, (234)
Oil Burners for Drying Dam Core, (312)
Oil under the Caspian, (56), (392)
Oil Cracking, Standard Oil Co., (170)
Oil in Manchukuo, (181)
Oil in Mongolia, (170)
Oil Output, Roumanian, H. G. Austin, (88)
Oil, Regeneration of, South African Research, 311
Oil, Shale, in Sweden, (40)
Oil Situation in the Middle East, 333, (423)
Oil Situation in Rumania, 259
Oil Situation in Russia, (138), 413
Opportunity, Equality of, 114; (Letter, 147)
Optical Dividing Head, Edgwick, Alfred Herbert, Ltd., 36
Optical Glass, Australian Manufacture of, (202)
Optical Protractor, A. C. Wickman, Ltd., 152
Ordnance Works in India, (343)

P

PAINT Materials, Export of, (218)
Paint, Solidified, for Marking, (122)
Paints, Effect of, on Porous Stone, (266)
Paints and Varnishes, Canadian, (376)
Palestine, Chemical Engineers for, (408)
Pallid Veil, 294
Paper-making in South Africa, 248
Paper-making in Turkey, (241)
Paper-reeling Machine, Photographic, T. H. Dixon and Co., Ltd., 193
Parliamentary and Scientific Committee, Science and the State, A. V. Hill, 134; (Leading Article, 130); (Letter, 164)
Patents, Enemy-owned, 196
Patents, German, Royalties on, 267
Patents, Inventions and, 417
Peace Aims, 131, 132, 148, 164, 195
Personal and Business Announcements—*Weekly*
Personnel and Procedure, G. A. Cheetham, 37
Perspiration Damage, Protective Compound for ("Ply No. 9"), Milburn Co., (370)
Petersen Coil Design, Oerlikon Co., 68
Petrol Restrictions, Further, (351)
Petrol from Shale, (266)
Petrol Stabiliser (Soya-Bean Lecithin), H. V. Rees, (266)
Petrol, Synthetic, (79)
Petroleum in Japan, (266)
Petroleum (No. 1) Order, 1941, 297
Petroleum-Toluol Plant, Shell Oil Co., (186)
Photographic Industry, Engineering and the, 192
Photography, Rust and Colour, (135)
Phthalic Anhydride Plant, Dominion Tar and Chemical Co., Ltd., (392)
Pipe Line Protection, (391)
Pipe Repairs, Emergency, 113
Pipes, Protecting Cast Iron, (106)
Plastic, Coffee ("Caffelite"), (218)
Plastics Combine in U.S.A., (392)
Plastics in Lieu of Metal, (56)
Plating Process, Indium Sulphate, (312)
Platinum in Alaska, (234)
Platinum in Australia, (56)
Plugs, Locating, 31, 66, 98, 115, 133
"Ply No. 9," Protective Compound for Perspiration Damage, Milburn Co., (370)
Plywood for Building in U.S.A., (312)
Polymerol, Chemical Oil Processing Co., (122)
Porous Masonry, (266)
Port of London Authority, Lord Ritchie's Retirement, 234
Post-war Problems, 80
Potash, Italian, (170)
Potash Mines, Alsatian, (170)
Potato Products Industry, 410
Power-Torque Meter, New Type of, W. C. Hall, 119
Power Trends, Present-day, A. C. Christie, 419
Press for Straightening Armour Plate, (344)
Press, 3000-Ton, for Iscor Works, 311
Price Stabilisation, L. St. Clare Grondona, 231
Prices, Control of, 377
Producer Gas, Australia and, (424)
Producer Gas for Heavy Vehicles, (234)
Producer Gas, South African Use of, 47
Producer Gas Transport in Sweden, (424)
Production, Avoidance of Bottle-necks in, 165
Production, Economic, Other Factors of, R. L. Tandy, 32; (Letters, 49, 65)
Production and Import Executives, 21
Propaganda by Boasting, 31, 79, 98, 115
Property, Bombed, Rebuilding of, 375
Protractor, Bausch and Lomb Optical, A. C. Wickman, Ltd., 152
Psychology of Discovery and Research, 64; (Letter, 98)
Pulp Statistics, (408)
Purification of Air and Gases, Controlled Heat and Air, Ltd., 420

PUMPS:
Dimensionless Characteristics of Turbines and Pumps, J. Jennings, 12
Pump Test Experience, Unusual, 95
Rotary Vacuum Pump for Aircraft, Fenton Smith Bros., 52

Q

QUARTZ Crystals, Use of, in Telecommunications, C. F. Booth, (88)
Queensland Shale Oil, (186)
Queensland Survey, (186)
Quicksilver, Supply of, (126)

R

RAILWAYS (GENERAL MATTERS):

Accidents:
British Railway Accidents in 1940, Annual Report, 393
"City of Los Angeles," Oil-electric Train Derailment, (218)

RAILWAYS, GENERAL MATTERS (*continued*):

Accidents (*continued*):
GREAT WESTERN RAILWAY:
Norton Fitzwarren Derailment, Report, 1
LONDON MIDLAND AND SCOTTISH RAILWAY:
Gretna Junction Accident, Report, 73
LONDON AND NORTH-EASTERN RAILWAY:
Brentwood Collision, 107
King's Cross and Newcastle Express Fire, (296)
Air Raids, Railways and 367
American Railroads, Finance of, E. H. Livesay, 49
American Railway Budgeting, (296)
American Railway Engineering Convention, 383
American Railway Gauge, (312)
American Railway Taxation, (360)
American Railways, Declining Traffic, (360); Efficiency, (376); Tunnels and Bridges, (250)
Atchison, Topeka and Santa Fe, Miniature Railway for Museum, (202)
Australian Buildings, Broken Hill and Port Pirie Line, (312)
Baltimore and Ohio Railroad, Propaganda Train, (282)
Berlin and Munich Reichsbahn Amalgamation Postponed, (18)
Bogie for Ingot Moulds, Head, Wrightson and Co., Ltd., (328)
Brazil Railways, (72)
Brenner Railway, 94
Burma Railways Extension, (344)
Canadian National Railways, Historic Lantern, (20); "Tale of a Bull Moose," (344); Water Tank Service, (344)
Canadian Pacific Railway, Earnings, (376); Ski Specials, (106)
Canadian Railways, Abandonments, (250)
Chile, Railways in, (296)
"Consignor to Pay" Proposal, (424)
Criticism of the Railways, 171
Drury, H. G., (138)
Eire Time-table Inconsistencies, (344)
Exhibition Coach, Railways, (424)
Facts About British Railways in Wartime, 367
Gauge Conversion in Japan, (72)
German Railway Wagon Hold-up, (40)
Government Control of the Railways, 171
Hungary and U.S.S.R. Line, (170)
Indian Railway Research, (234)
Indian Railways, Dismantling, (218); Free Travel, (312)
Iran Railway Extensions, (72)
Japanese Railways, Nanning and Kwangung Line, (40)
Lantern, Historic, Canadian National Railways, (20)
Light Railway Transport League, (72)
Mexican Railway Extension, (376)
Milwaukee Railway Budget, (266)
Ministry of Shipping and Transport, 297
New York Central "Empire State Express," (202)
New York Level Crossings, (266)
New York Ninth Avenue Railway, Demolition, (154)
New York Underground, (154)
Overloading of Trains, (218)
Parcels, Extra Heavy, (328)
Passenger Train Services, (20)
"Pendulum" Suspension Coaches, 145
Pooling of Railway Freight Rolling Stock, 187
Pullman Car Co., Employees' Suggestion Scheme, (424)
Pullman Cars Requisitioned in Washington, (186)
Radio and Freight Classification, (138)
Rail and Road—*Weekly*
Repairs After Air Raid Damage, (344)
Road *v.* Rail in 1940, 4
Road and Rail Once More, 274
Ski Specials, Canadian Pacific Railway, (106)
Sleepers, Life of, in Ceylon, (138)
Sleepers, Splitting of, (20)
South African Railways, New Works Programme, 184; T. H. Watermeyer's Retirement, 248
South Manchurian Railway, European Office, (40)
Spanish Railways, Fuel Shortage, (40)
Sugar Beet Traffic in Ireland, (122)
Swedish Railways, Fuel Scarcity, (328)
Swiss Post Office Railway, (218)
Swiss Railway Problems, (392)
Swiss Railways, Loop Line from Geneva Cornavin to La Praille Port, (186)
Taxation, American Railway, (360)
Transandine Railway Tunnel, South America, 7
Trans-Saharan Railway, (360)
Transport, The Future of, G. Mills, 155
Wages, 107, 329
Wagon, All-welded, Victoria Government Railway, (392)
Wagon Sheets, (20)
Wagons for Freight in U.S.A., (282)
War, Railways and the, 1, 367
Welsh Highland Railway for Scrap, (202), (282)
Western Desert Railway, (56)
Women on Russian Railways, (392)
Yucatan Railways, (202)

Great Western Railway:
Annual Meeting, 187
Collett, C. B., Retirement, (360)
Fire-fighting Trains, (138)
Potter, F. R., Retirement, (20)
"St. Patrick," Steamer, Loss of, (408)
Swindon, 49
Telephone Inquiries, (170)

London Midland and Scottish Railway:
Annual Meeting, Lord Stamp's Speech, 171
Appointments, (328)
Burrows, R. A., Appointed Deputy Chairman, 283
Canteens, Travelling, (250)
Crewe Station Loudspeakers, (72)

RAILWAYS, GENERAL MATTERS (*continued*):

London, Midland and Scottish Railway (*continued*):
Haigh Fatigue Testing Machine, The Action of the, E. Warlow-Davies, 350
Lemon, F. A., Retirement, (312)
Paper Reclamation Scheme, (234)
Royden, Sir T., Appointed Chairman, 283
Salvage Record, (154)
Splinterproof Glass, (234)
Troop "Specials," (202)
Women Railway Workers, (106)

London and North-Eastern Railway:
Annual Meeting, 171
Bow Road Station Closed, (266)
Chief Mechanical Engineer's Department, Reorganisation, 377
Great North of England Railway Centenary, 21, (72)
Richards, W. H., Appointed Chief Electrical Engineer, 283
Stockton and Hartlepool Line, Centenary, (154)
Suburban Services, (376)
Thompson, E., Appointed C.M.E., 283

Southern Railway:
Annual Meeting, 187
Schuster, Sir G. E., Co-opted a Director, (392)

Electrification of Railways:
Brazil Electrification, (170)
South African Railway Electrification, 248
Swedish Railway Electrification, (376)
Swiss Railways Electrification Extensions, (138)

RAILWAYS, LOCOMOTIVE MATTERS:
American Locomotive Working, 232
Anderson Locomotive Front End (Spark Arrester), (376)
Beyer-Garratt Locomotives, (360)
Brazil Railways, New Locomotives, (40)
Canadian Locomotive Experiences, Edward H. Livesay, Nos. I, II, and III, C.N.R., "The Continental Limited," 172, 188, 252; Nos. IV, V, and VI, "The Dominion" Transcontinental, C.P.R., 346, 362, 378
Chicago, Rock Island Railway, "5000" Class Locomotives and Bridges, (122)
Coaling Station, "One-stop," near Buffalo, (392)
Cotton Cake for Fuel, (106)
Electric Mining Locomotive, (56)
Fire-boxes, Steel *v.* Copper, W. Palmer, 370
Gas-Turbine Locomotive, Brown, Boveri and Co., 105
Grimshaw's Locomotive Catechism, (408)
India Locomotive Shipments, (154)
Links in the History of the Locomotive, C. F. Dendy Marshall, 402
L.M.S. Railway, "King George VI" "Coronation" Class Locomotive, (360)
L.N.E. Railway, 2–6–2 Type "V.4" Class Locomotive, 144; (Letter, 164)
Montreal Locomotive Works, (88)
New South Wales Railways, Efficiency of Locomotives, 24
New York Central Railway, Eight-coupled Passenger Engines, 273
Noise from Locomotives, (360)
Peat for Locomotives, (202)
Rhodesian Railways, Shunting Engine Renamed "Churchill," (392)
Rushes for Locomotive Fuel in U.S.S.R., (296)
Southern Railway, Locomotive Fire-engine, Merryweather and Sons, Ltd., 421
Southern Railway, "Merchant Navy" Class, Pacific Engine "Channel Packet," 18, (424); (Letter, 354)
Streamlined Locomotives, (312)
West Maryland Railway, Single-expansion 4–6–6–4 Freight Locomotives, (186)

Diesel, Oil, and Oil-Electric (and Railcars):
Combustion Turbine Locomotives, American, 232
"Diesel-Line" Electric Locomotive, L.P.T.B., 309
L.M.S. Railway, Oil-electric Shunting Engines, C. E. Fairburn, 326
Oil-electric Locomotive, Care of, in U.S.A., 79
Oil-electric Locomotives, American, 359
Oil-engined Railcars for New Zealand, Vulcan Foundry, Ltd., (312)
Radium and Uranium Production, (122)
Rand's Arms Factories, 47
Rankine, W. J. M., 183
Rearmament, Cost of, Guaranty Trust of New York, 280
Rebuilding of Bombed Property, 375
Reconstruction, Post-war, Town Planning and, L.C.C. Report, 409
Reconstruction, Preparatory Work for, Committee, 89
Red Cross Agriculture Fund, (415)
Red Sea Tin, (170)
Reflections, J. H. Van Deventer, 69
Registration, Industrial, 96
Registration of Storage Space, 313
Research in America, (249)
Retrospect of 1940, 10
Rhodesia's Industries, 129
Rifle, Facts About the, D. Weir, 314, 330; (Letters, 370, 401)
"Rindia" Rotary File, Lorant and Co., Ltd., (138)
Riveted Joints, Stresses in, J. D. W. Ball, 100

ROADS AND HIGHWAYS:
American Military Roads, 133, 399
American Road and Transport Problems, (106)
American Strategic Highways, (250)
Auto Route de l'Ouest, France, 5
Boston and Washington Super-Highway, (328)
Canada and United States Military Highways, (56)
Connecticut Road Survey, (376)

ROADS AND HIGHWAYS (*continued*):
Goods Transport by Road, J. S. Nicholl, (122)
Johannesburg Road Construction Problems, 310
Lighting, Street, and Overhead Wires, (424)
Luminous Paint for Marking Carriageways, (296)
Magnet, Road, Invention, (88)
Manchester Road Problems, 155, 391
Ministry of Shipping and Transport, 297
Northern Ireland Road Transport, (88)
Profile Railroad, U.S.A., Converted to Highway, (170)
Rail and Road—*Weekly*
Road *v.* Rail in 1940, 4
Road and Rail Once More, 274
Road Transport, (20); (Defence) Advisory Committee, 41
Road Transport Scheme, New, 73
Road Transport of War Goods, (106)
Roads and Bridges in 1940, 5
Safety Devices, South African, (40)
Sealing Expansion Joints, Canadian Research, (424)
Transport, The Future of, G. Mills, 155
War Damage to Roads, 89
"Rope Talks," British Ropes, Ltd., (408)
Ropeway, Aerial, and Band Conveyors at a Brickworks, Mavor and Coulson, Ltd., and R. White and Sons, 293
Roof, Temporary, American Senate, (202)
Roumanian Oil Output, H. G. Austin, (88)
Ropeway, Big Swedish, (412)
Royalties on German Patents, 267
Rubber Output, American and Canadian, (408)
Rubber, Synthetic, for Tyres ("Chemigum"), Goodyear Tyre and Rubber Co., (55), (408)
Rumania, Oil Situation in, 259
Russia, Oil Situation in, 413

S

ST. LAWRENCE Waterway Project, 66, (186), 203, (282), (296)
Salary of Engineers in Government Service, 354, 387
Sales Data, The Analysis of, R. T. Kent, 104
Salt, New Chemical, (282)
Salvage Returns, (202), 267, (424)
Salvage of Waste, (122)
Samuelson, F., Retirement of, 345
Sandpaper, (196)
Schneider Works, (218)
Scholarships in Architecture, (121)
Scholarships, Miners', (20)
Science, Applied, and War, 242
Science and the State, A. V. Hill (Parliamentary and Scientific Committee), 134; (Leading Article, 130); (Letter, 164)
Scientists, Engineers and, 414
Scrap Metal, (145)
Sea Water, Deterioration of Structures in (Inst. C.E. 18th Report), 204
Seat-in-Sleeve Valve, Walker, Crosweller and Co., Ltd., 86
Seaweed, Acid from, (31)
"Seeds of War," K. Anderson, (138)
Select Committee on National Expenditure, 62, 112, 128, 167, 319, 345; (Leading Articles, 64, 114); (Letters, 133, 196)
Sensitised Metal Templates, Metal Photo-Drafting Co., 54
Separator, Magnetic, for Cleansing Lubricating Oil, (229)
Sewage, Gas from, in Stockholm, (72)
Sewage, Treatment of, at Barston, Solihull, 180
Sewage and Water, Straining of, P. L. Boucher, 322
Sewage Works, Chicago South-West, 200
Shale Oil in Queensland, (186)
Shale Oil in Sweden, (40)
Shark Oil Factory in South Africa, 311
Shell Forging Plant in South Africa, 129
Shells, Machining British, in Canada, 166; (Letters, 196, 227, 243)

SHIPS AND SHIPBUILDING:

General:
American Cargo Ships for Great Britain, (154)
American Marine Notes, 359
American Shipbuilding, (170), (202), (250), (360)
American Shipyards, 398
Australian Shipbuilding, (20)
Bankot, Bombay, Motor Launch, (170)
Blohm and Voss Shipyard, Hamburg, 385
Britain's Need for Ships, 57
Canadian Shipbuilding Orders, (154)
Cargo-handling Gear, L. T. Morton, 256
Cargo Liners, Fast, 286
Chamber of Shipping, Annual Meeting and Report, 139, 155
Control of Shipping, (344)
Deeper Loading of Ships, 297
Design, Trends in, in 1940, 15
Empire Shipbuilding, 21
Exports, Speeding Up the Shipment of, 123
Finnboda Shipyard, Stockholm, Extensions, (154)
Gas for Small River Craft, (72)
General Council of British Shipping, 283 345
German Liners, The Passing of, (202)
Gulf Ports Freight Service, (250)
Indian Shipping Advisory Committee, (122)
Isthmian Steamship Line, "C-3" Cargo Vessels for Round-the-World Service, (72)
Journal of Commerce Review of Shipping, (88)
Labour in Shipyards, 155
Labour and Wages in 1940, 14
Lifeboat Institution, Royal National, The Mechanical Requirements of, P. H. Johnson, 149
Lifeboat "Jane Hannah," (40)
Lifeboat, Motor, for Cadgwith, Cornwall, (360)
Lifeboat Service, Statistics, (72), (282)
Lighting at Ports, (266)

SHIPS AND SHIPBUILDING (*continued*):

General (*continued*):

Lloyd's Register of Shipping, American Surveys, 95; Annual Meeting, (408); Scholarship, (122)
Marine Engineering, Progress in, S. F. Dorey (Lowe Gray Lecture), 76, 90
Mercantile Shipping Losses, (40), (88), (138), (202), (218), (234), (250), (266), 313, 361, 409
Merchant Navy Construction Programme in 1940, 14
Merchant Navy at War, R. Cross, 89
Merchant Shipbuilding in the British Empire, 283
Merchant Shipping (Fire Appliances) Rules, (20)
Merchant Ships, Replacement of, 219
Ministry of Shipping and Transport, 297
Monel for Boat Nails, (56)
Morris Vedette Engines for Ships, (138)
Nautical Tables, Appeal for, (154)
Oeresund Shipbuilding Co., Sweden, Transfer, (266)
Old Groton, Connecticut, Shipyard, (72)
Portland Shipyard, U.S.A., 398
Refloating Sunken Ships, R. Ryves, 163; G. E. Shaw, 196
Repairs, Progress in, in 1940, 14
Replacement of Merchant Ships, 219
Richmond Shipyard, U.S.A., 398
Royal National Lifeboat Institution, The Mechanical Requirements of, P. H. Johnson, 149
Ship of the Future, A. C. Hardy, 136
Shipbuilding and Marine Engineering in 1940, 14, 44
Shipbuilding Programmes, British and American, 45
Shipping Losses by Enemy Action, 44
Ships' Cargo-handling Gear, L. T. Morton, 256
Shipyards and Essential Work Order, (328)
Speeding Up of Shipping at Ports, 41
Stoking, Mechanical, at Sea, 45
Structural Engineers to Build American Ships, (312)
Swedish Fishing Fleet to Use Wood Tar Fuel, (72)
Swedish Shipbuilding, (165)
Swedish Shipping Losses, (376)
Tankers, Government to Requisition, 1
Use and Hire of Ships (Control) Order, 1941, (344)
War Losses, (40), 44, (88), (138), (202), (218), (234), (250), (266), 313, 361, 409
Whale Oil Ships, Canadian, (154)
Wood Tar Fuel to be Used by Swedish Fishing Fleet, (72)

Named Liners and Miscellaneous Vessels:

America, United States Liner, 16 (*Supplement, January 3rd*, 1941); Acquired by U.S. Navy, (392)
Bremen, German Liner, Fire, 187
Curaca, Grace Line Freighter, (250)
E. H. Blum, All-welded Tanker, Sun Shipbuilding Co., (344)
Ernest Lapointe, Canadian Icebreaker, (250)
Frank Rayner, Trent Motor Tug, Warren's New Holland Shipyard, Ltd., 342
Hermelin, Hong Kong Built Motorship, 46
Invicta, Southern Railway Steamer, 45
Karuah, Newcastle and Hunter River Steamer, 45
Mormacpenn, United States Motorship, 46
Oberhofen, Lake Thoune Motor Vessel, (72)
Oranje, Dutch East Indies Motorship as Hospital Ship, (154)
Pasteur, French South Atlantic Liner, 16 (*Supplement, January 3rd*, 1941)
Queen Elizabeth, Cunard White Star Liner, 15 (*Supplement, January 3rd*, 1941); at Cape Town, 21
S. Lewabewsky, U.S.S.R. Icebreaker, (122)
St. Patrick, G.W.R. Steamer, Loss of, (408)
Solon Turman, Cargo Liner, Bethlehem Steel Co., (360)
Stockholm, Swedish America Liner, 16 (*Supplement, January 3rd*, 1941)
Sven Salen, Swedish Motorship, Eriksbergs Mek. Verkstad, (369)

Naval Matters:

BRITISH AND COLONIAL:

H.M. Aircraft Carrier, "Illustrious," 13
H.M. Australian Destroyer "Arunta," 57
H.M. Battleship "Duke of York," Launch, 25
H.M. Battleship "King George V," 84
H.M. Battleship "Malaya," Repair of, 267
H.M. Battleship "Prince of Wales," Cammell, Laird and Co., Ltd., 287
H.M. Cruiser "Bonaventure," Loss of, 251
H.M. Cruiser "Cornwall," Indian Ocean Operation, 313
H.M. Cruiser "Hood," Design of, 345
H.M. Cruiser "Hood" and the "Bismarck," 357; (Leading Article, 353)
H.M. Drifter "M. A. West," Loss of, (424)
H.M. Merchant Cruiser "Rajputana," Loss of, 283
H.M. Merchant Cruiser "Voltaire," Loss of, 297
H.M.S. "Crispin," Loss of, 139
H.M.S. "Jersey," Loss of, (408)
H.M. Submarine "Triton," Loss of, (88)
H.M. Submarine "Usk," Loss of, (376)
H.M. Trawler "Cobbers," Loss of, (186)
H.M. Trawler "Kopanes," Loss of, (328)
H.M. Trawler "Remills," Loss of, (186)
H.M. Trawler "Rochebonne," Loss of, (328)
H.M. Trawler "Sindonis," Loss of, (424)
Admiralty Control of Shipbuilding Labour, 171
Corvettes, Naval, 21
Crete, Naval Losses Around, 361
Dive Bomber *versus* the Navy, 96
Indian Ocean Naval Operations, 313
Ionian Sea, Battle of the, 228; (Leading Article, 226)

SHIPS AND SHIPBUILDING (*continued*):

Naval Matters (*continued*):

BRITISH AND COLONIAL (*continued*):

Libyan Army and Naval Co-operation, (106)
Naval Construction in 1940, 13, 25 (*Supplement, January 3rd*, 1941)
Naval Construction Contracts, 329
Naval Construction, Record, 171
Navy at War, A. V. Alexander's Speech, 178
Repair of H.M. Ships, 267
"Y" Scheme for Entry into the Navy, (392)

FOREIGN:

American Battleship "North Carolina," 251
American Battleship "South Dakota," Launch, (408)
American Battleship "Washington," 329
American Battleships, New, (266)
American Naval Bases, 66
French Naval Ships of 1940, 26
German Battleship "Bismarck," 357
German Battleships "Scharnhorst" and "Gneisenau" Bombed at Brest, 235
German Naval Ships of 1940, 26
Great Lakes, Naval Shipbuilding on, 203
Italian Battleships of "Littorio" Class, 228
Italian Cruiser "Zara," 229
Italian Destroyer of "Grecale" Class, 228
Italian Naval Ships of 1940, 26 (*Supplement, January 3rd*, 1941)
Italian Warships Damaged or Sunk in 1940, 26 (*Supplement, January 3rd*, 1941)
Japanese Naval Ships of 1940, 25
Polish Submarine "Sokol," 57
Russian Naval Ships of 1940, 26
United States Naval Ships of 1940, 25
United States Navy, Airships, (20)
United States Navy Ordnance Plant, 169

SIXTY YEARS AGO:

"Almirante Brown," J. Samuda, 227
American Cleopatra's Needle, 185
"Atalanta," 18
Blackheath Subsidences, 82
Boilers, Red-hot, 307
Channel Tunnel, 407
"City of Rome," High-speed Steamship, 415
Cleopatra's Needle, The American, 185
"Doterel," H.M.S., Loss of, 289
Electrical Energy, Storage of, 391
Education of Engineers, 370
Electrical Railroads, 321
Electricity, Development of, 212
Invisible Paint, 133
Machine Gun Trials, 118
McNaught, William, 49; (Letter, 66)
Nationalisation of Railways, 71
Naval Engineers, The Status of, 196, 273
Paint, Invisible, 133
Parsons High-speed Motor, 343
Pease, Henry, 355
Railroads, Electrical, 321
Railways, Nationalisation of, 71
Railways and the Weather, 243
Red-hot Boilers, 307
"Servia," Cunard Liner, 145
Solway Viaduct Accident, 95
Status of Naval Engineers, 196, 273
Steamships, High-speed, 415
Steel *versus* Iron, 164
Steel Ships and Boilers, J. Samuda, 227
Storage of Electrical Energy, 391
Torpedo Boat Design, 39
Weather, Railways and the, 243
Zero Motor, 264

Short Notices—*see* Literature
Shot-grit Sizes, (296)
Single-storey Factories (Wartime Building Bulletin, No. 15), 403
Skoda Works and A.A. Guns, (122)
Sludge as Fuel, R. E. Fuhrman, (250)
Smelter, Soviet Molybdenum, (20)
Smokeless Powder Plant, (250)
Snow Flakes, Preservation of, U. T. Schaefer, (360)
Snow Problems in Canada, (154)
Snow Removal in U.S.A., (218)
Soda Ash in Brazil, (250)
Solids, Mechanical Properties of, E. N. da C. Andrade (Forrest Lecture), 294, 380, 394
Soot Blowers, Automatic Electrically Controlled, Hopkinsons, Ltd., 374
Sorting of Aggregates, W. M. Dunagan, (266)
Sound-spotting Scheme, Benjamin Electric, Ltd., 184
South Africa, Technology in, V. Bosman, (72)

SOUTH AFRICAN ENGINEERING NOTES:

Base Metals, Exploiting, 184
Copper Belt of Northern Rhodesia, 310
Crystalline Gold, 184
Electricity Expansion, Loan for, 129
Industries, New, 310
Industry and the War, 129
Iscor Steel Works, 129
Iscor Works, 3000-ton Press, 311
Johannesburg Road Construction Problems, 310
Mining Problems, W. Reid, 310
1941 Eventful for Union, 184
Oil Regeneration, 311
Papermaking in the Union, 248
Press, 3000-Ton, for Iscor Works, 311
Producer Gas, Use of, 47
Railways, New Works Programme, 184
Rand's Arms Factories, 47
Rhodesia's Demand for Electricity, 47
Rhodesia's Industries, 129
Road Construction Problems, 310
Sabie Hydro-electric Generating Station, 47
Secondary Industries, 184
Shark Oil Factory, New, 311
South African Railways, T. H. Watermeyer's Retirement; Limit of Electrification; Increased Revenue, 248

SOUTH AFRICAN ENGINEERING NOTES (*continued*):

Table Bay Harbour Record, 311
Timber Industry Expands, 248
War Industries, 248
War Plans and Production, 47
Wavell's Army, Union Supplies for, 129

South African Metallurgical Research, 321
South African Tin Supplies, (20)
South Africa's War Output, Stepping up of, T. P. Stratton, 216
South American Standards Committee, 377
Soya Bean Lecithin as Petrol Stabiliser, H. V. Rees, (266)
Specialised Manufactures, Financing Exports of, W. W. Syrett, 371
Spelter for Japan, (72)
Standardisation in Argentina, (218)
Stanford University, Earthquake Resistant Tower, 273
Starch (Potato) Extractor, 410
Steam Turbine Nozzle and Blading Efficiency, F. Dollin, 53, 69
Stockholm Industrial Museum, (234)
Stockholm Sewage Disposal Plant, (312)
Stockholm Technical University, Chair in Technical Physics, (282)
Stodola, Dr., and the James Watt International Medal, 73, 78
Storage Space, Registration of, 313
Strainer, Self-cleaning (Gardner), Alley and MacLellan, Ltd., 198
Straining of Water and Sewage, P. L. Boucher, 322
Stress Distribution in Reinforced Concrete Arches, R. H. Evans, 301
Stresses in Riveted Joints, J. D. W. Ball, 100
Structures, Deterioration of, in Sea Water (Inst. C.E., 18th Report), 204
Sugar, Power Alcohol from, (296)
Sunlight Treatment, Artificial, Guy Motors, Ltd., 398
Super-Summertime, 305; (Letter, 355)

SUPPLEMENTS:

Civil Engineering in 1940 (Supplement, January 3rd, 1941)
Italian Warships Damaged or Sunk in 1940 (Supplement, January 3rd, 1941)
Liners of 1940 (Supplement, January 3rd, 1941)
THE METALLURGIST (Supplement, February 28th, April 25th, June 27th, 1941)—*see* Index, page xii

Supply Council, British, in North America, 41
Supply, Ministry of—*see* Ministry of Supply
Surface Analyser, The Brush, A. C. Wickman, Ltd., 231
Surface Hardening by Induction, H. B. Osborn, 372
Surgery and Cleansing Station, British Timken, Ltd., 397
Swarf Breakers, D. F. Galloway, (234)
Synthetic Petrol, (79)
Synthetic Rubber, Goodyear Tyre and Rubber Co., (408)

T

TALC Production, South African, (408)
Tank, Medium "M-3" Type, Baldwin Locomotive Works, (424)
Tank Tractors for Sewage Sludge, Allis-Chalmers Manufacturing Co., 232
Tanks and Aeroplanes, American, 267
Tanks, American, (360)
Tantalum Alloys, (154)
Tar Oils as Motor Fuel, (29)
Technical Education, 409

TECHNICAL REPORTS:

Hot Tinning, C. E. Homer, 113
Pipe Repairs, Emergency (Wartime Building Bulletin, 12), 113
Wartime Building Bulletin, No. 13—Fire Protection of Structural Steel Work, 229
Wartime Building Bulletin, Centerless Arch Design, 249

Technology, A, "Go-as-you-Please," 177, 211, 414
Technology in South Africa, V. Bosman, (72)
Teesside Transport Problems, (88)
Telephone Bells, Glass, (170)
Telephones, War Damaged, (376)
Temperature Control, Automatic, The Principles of, M. J. Gartside, 324
Temperature and Latent Energy in Flame Gases, W. T. David, 268
Templates, Sensitised Metal, Metal Photo-Drafting Co., 54
Terms, New Engineering, C. Turnbull, 243
Testing Machine for Plates, Detroit Testing Machine Co., (186)
Timber Industry, South African, 248
Timber Supplies, Larger, 73
Tin, Reclaimed, (312)
Tin, Red Sea, (170)
Tin, Requisitioned, (122)
Tin Research Institute, Work of, 139, (303)
Tin Supplies, South African, (20)
Tinning, Hot, C. E. Homer, 113
Tin-plates by a New Process, Standard Steel Spring Co., (281)
Toluol Plant, Shell Oil Co., (186)
Town Planning and Post-war Reconstruction, L.C.C. Report, 409
Traction Engine, Oil Engine-driven, J. and H. McLaren, Ltd., 279
Tractor Control Unit, David Brown Tractors, Ltd., 33
Tractors, Agricultural, (88)
Trades Union Congress and Man Power, 89
Trading, Government, in War (Select Committee on National Expenditure), 112, 128; (Leading Article, 114); (Letters, 133, 196)
Training Army Craftsmen, 297, (376)
Training (Auxiliary) in the Engineering Industry, 73
Training Industrial Workers, 107
Transport, The Future of, G. Mills, 155
Transport Officers to Assist Exporters, Board of Trade, 283
Traughber Filter for Air and Gases, Controlled Heat and Air, Ltd., 420
Truck, 250-Ton, for Ingot Moulds, Greenville Steel Car Co., (282)
Truck, Low Load Lifting, E. H. Jones (Machine Tools), Ltd., 104
Tungsten Concentrates, (282)
Tungsten Ore Deposits, Canadian, (154)
Tungsten Discovery in America, (344)

TUNNELS:

American Railway Tunnels, (250)
Carlton Drainage Tunnel, Colorado, (186)
Dartford-Purfleet Tunnel, 7
Japanese Underwater Tunnel at Kynshu, (296)
Maas Tunnel, Holland, 7, (376)
Mobile River Tunnel, Alabama, 7 (*Supplement, January 3rd*, 1941)
Queens Midtown Tunnel, New York, 7
Transandine Railway Tunnel, South America, 7

Turbine History, Iowa Institute of Hydraulic Research, (360)
Turbine Speeds, (266)
Turbine, Steam, Nozzle and Blading Efficiency, F. Dollin, 53, 69
Turbines, 28,000 H.P., Dismantling, at Chats Fall Station, Ontario, 241
Turbo Machines, Non-dimensional Characteristic Design Factors for, J. R. Finniecome, 276
Turner Valley, Alberta, Ammonium Nitrate Plant, (154)
Tyre Manufacture, American and Canadian, (408)

U

UNIONS' Wages Claims, 21, 57

V

VALVE, Gas Trap, 148
Valve, Seat-in-Sleeve, Walker, Crosweller and Co., Ltd., 86
Vegetable Oils as Fuel for C.I. Engines, (344)
Veil, The Pallid, 294
Ventilator for Air Raid Shelters, Vent-Axia, Ltd., 86
Vested Interests, 259
Vibration, Damage from S. L. Windes, (282)
Vulcaniser for Cable Jointing, Harvey Frost and Co., Ltd., 85

W

WAGE Changes During 1940, 107
Wages Claims, Engineering Trade Unions', 21 57
Wages and Welfare in Factories, 89
Waiting Time, A. C. Whitehead, 370
War Aims, E. Kitson Clark, 42; (Leading Article, 48); (Letters, 78, 98, 131, 148, 164, 196)
War, Applied Science and, 242
War Damage Commission, 219
War, Economic, and the Engineering Industry, A. M. de Neuman, 2
War, Engineers and the, 10
War, Government Trading and (Select Committee on National Expenditure), 112, 128; (Leading Article, 114); (Letters, 133, 196)
War, Hydrogenation and, A. E. Williams, 58
War Industries, South African, 248
War Industry, Canada's, 73
War and Industry in China, (218)
War Material, Production of (12th Report on National Expenditure), 319
War, Mobilisation of Industry for the Purposes of, D. A. Bremner (B.E.A.), 22; (Leading Article, 30)
War Output, South Africa's, Stepping-up of, T. P. Stratton, 216
War Plans, South African, 47
War Risks Claims, Settlement of, 123
War Transport Council, 235; (Leading Article, 242)
War Transport, Ministry of, 313, (408)
Wartime Building Bulletin No. 15, Standard Single-storey Factories, 403; No. 16, Mortars for Brickwork, (424)
Wartime Building Industry, 403
Wartime Building Regulations, 297
Wartime Fertilisers, (106)
Wartime Labour Problems, (40), 219
Water and Sewage, Straining of, P. L. Boucher, 322
Watt International Medal, Dr. Stodola and, (51), 73, 78

WATER SUPPLY:

American Military Water Purification Plant, 233
Calcutta Water Supply, (360)
Carruthers Point, Lake Ontario, Water Intake, (234)
Delaware Aqueduct and Merriman Dam, 24 (*Supplement, January 3rd*, 1941)
Frozen Water Pipes, (408)
Guernsey Water Supply, St. Saviour's Dam, 23 (*Supplement, January 3rd*, 1941)
Madras Water Supply, (122)
Mono Basin Scheme, Los Angeles, 24
Potable Water Standards, American, (296)
Rangoon Water Supply, Gyobyu Dam, 23 (*Supplement, January 3rd*, 1941)
South African Water Supply, Clarification of, (282)
Water Supply in 1940, 23

WELDING:
Arc Welding Cr-V Steel, (106)
Carillon, Welded Steel-framed, Lincoln Electric Co., Ltd., 200
Flash Butt Welder, Arc Manufacturing Co., Ltd., 281
Galvanised Sheets, Welding, (415)
Glass, Welding of, (360)
Hangar, All-welded, at Baltimore, (250)
Marine Engineering, Welding in, 91
Tanker, All-welded, Sun Shipbuilding Co., (344)
Welding Materials, Changes in, U.S. Bureau of Mines, (56)
Welfare Workers for Industry, Supply of, R. R. Hyde, 275
What is Charity? 195
Wild-Barfield Electric Furnaces, Ltd., Works, 151
Wind Turbine for Air Research, General Electric Co. of America, (344)
Wire, Oil-tempered, Process, Jones and Laughlin, (40)
Wire Ropes, (202)

WIRELESS:
Delhi Broadcasting House, (344)
Lucknow Wireless Station, (360)

WIRELESS (*continued*):
Radio Location, 393
Radio in Wartime, 48
Railway Freight Classification by Radio, (138)
Wolfram Ore in Jugo-slavia, (72)
Women, Engineering Training for, (186)
Women in Industry, Miss C. Haslett, 267
Wood, Alcohol from, "Defribator" Method, (106)
Wood-briquetting Machine, R. T. Bowling, 182
Wood, Twisting of, (408)
Wood Wool for Packing, (122)
Woolindras Process, (234); (Letter, 264)
Works and Buildings, Ministry of, 155
Works, Director of, Colonel C. L. Howard Humphreys Appointed, 1
Works Surgery and Cleansing Station, British Timken, Ltd., 397

Y

YOUNG Offender, The, 320

A Seven-Day Journal

A

ACCIDENTS on British Railways in 1940, 393
Accidents in Factories, 139
Admiralty Control of Shipbuilding Labour, 171
Aerodromes, Delay in Building, 219
Air Appointments, New, 377
Air Raid Damage, Emergency Repair of, 123
Air Training Corps, 41
Aircraft, British, Strength of, 57
Aircraft, New British, 41
Aircraft, Enemy, Destruction of, 377
Aircraft Production, British, 203
Aircraft Production in America, Sir W. Citrine, 139
Aliens, Employment of, 41
Amalgamated Engineering Union, Wages Claims, 21, 57
American Tanks and Aeroplanes, 267
Appleyard, K. C., Appointed Director of Emergency Construction, 107
Armstrong, Professor H. E., Memorial Lecture, 89
Army Craftsmen, Training, 297
"Arunta," Australian Destroyer, 57
Associated Portland Cement Manufacturers, Ltd., Annual Meeting, 251
Association of Scientific Workers, Annual Council Meeting, 361
Atlantic Flight Record, P. Eves, 73
Automobile Research, W. A. Tookey and E. Giffen, 361

B

BIRMINGHAM Metallurgical Society, Presidential Address, C. H. H. Franklin, 171; (Letter, 243)
Birthday Honours, 393
Board of Trade, Transport Officers to Assist Exporters, 283
Bomber and Fighter (Night) Losses, Enemy, 313
Bombers, Night, Detection of, 329
Bombing Raids on Germany, 57
"Bonaventure," H.M. Cruiser, Loss of, 251
Boulton and Watt Deptford Engines for Scrap, 57; (Letter, 66)
Brentwood Collision, L.N.E.R., 107
"Bremen," German Liner, Fire on, 187
Bricks, Standardisation of, 377
Britain's Need for Ships, 57
British Aircraft Production, 203
B.E.A.M.A. Report, 251
British Shipping, General Council of, 345
British Supply Council in North America, 41
Building and Civil Engineering Industries, Essential Work Order, 393
Building Firms, Registration of, 409
Building Regulations, Wartime, 297
Burrows, R. A., Appointed Deputy Chairman, L.M.S., 283

C

CANADA'S War Industry, 73
Canal Industry, British, 283
Canals in Wartime, 123, 219
Cement Industry, 251
Cement Production Committee, 41, 393
Chamber of Shipping Report, 139, 155
Chree and Duddell Medals, Physical Society, 1
Closing Redundant Factories, 155
Coal Industry, Control of, 251
Coal Production, Increased, 409
Concrete Houses, 267
Contractors' Plant Association, 361
Control of Prices, 377
"Cornwall," H.M. Cruiser, Indian Ocean Operations, 313
Corvettes, Naval, 21
Craven, Sir Charles, New Appointment, 393
Crete, Naval Losses, 361
"Crispin," H.M.S., Loss of, 139
Crystal Palace Towers, 267

D

DEEPER Loading of Ships, 297
Deptford Engines, Boulton and Watt, for Scrap, 57; (Letter, 66)
Dock Labour in Glasgow, 251
Dock Labour in Merseyside Areas, 155
Documentary Films to Promote Exports, 139
Duddell and Chree Medals, Physical Society, 1

E

ELECTRICITY Charges, 377
Electricity Undertakings and War Conditions, 409
Emergency Construction, Director of, K. C. Appleyard's Appointment, 107
Emergency Repair of Air Raid Damage, 123
Empire Shipbuilding, 21
Employment Returns, Ministry of Labour, 41, 107, 171, 251, 345, 393
Enemy Aircraft, Destruction of, 377
Engineering, Seventy-fifth Birthday, 21
Essential Work Order for the Building and Civil Engineering Industries, 393
Excess Profits Tax, Engineering Firms and, 219
Export Trade with America, 235
Exports, Speeding Up the Shipment of, 123

F

FACTORIES, Closing Redundant, 155
Factories, Wages and Welfare in, 89
Factory Accidents Report, 1939, 139
Factory and Storage Premises, Controller-General of, 235
Faraday Medal Award, A. P. M. Fleming, 89
Federation of British Industries, Industry's Task, 1
Films, Documentary, to Promote Exports, 139
Fire Bomb Fighting, 57
Fire Detection Devices, I.E.E. Memorandum, 123
Fire Prevention Executive, 21
Fire Prevention Order, 203
Fleming, A. P. M., Faraday Medal Award, 89
Focke-Wulf "Kurier," German Bomber, 57
Freight Rolling Stock, Pooling of, 187

G

GENERAL Council of British Shipping, 283, 345
German Battleships "Scharnhorst" and "Gneisenau" Bombed at Brest, 235
German Bomber (Focke-Wulf "Kurier"), 57
German Patents, Royalties on, 267
Glasgow, Dock Labour in, 251
Glen Affric Power Scheme, 361, 409
Grand Coulee Dam and Power-house, 203
Grand Union Canal Co., Annual Meeting, 283
Great Lakes Naval Shipbuilding, 203
Great North of England Railway, Centenary, 21
Great Western Railway, Annual Meeting, 187; Norton Fitzwarren Accident, 1
Gretna Junction Accident, L.M.S., 73

H

HADFIELD, Sir Robert, Bequests, 139
Hadfields, Ltd., Annual Meeting, 219
Helmets, Steel, Civilian Type, 107
Highlands Water Power Schemes, 361, 409
Holt, Sir Richard, The Late, 203
Honours, Birthday, 393
"Hood," H.M.S., Design of, 345
Houses, All-concrete, 267
Humphreys, Col. C. L. Howard, Director of Works, 1

I

IMPERIAL Chemical Industries, Ltd., Annual Report, 329
Imperial Institute Report, 107
Import and Production Executives, 21
Indian Mechanics, Training, 1
Indian Ocean Naval Operations, 313
Industrial and Export Council, 187
Industry's Task in the New Year, Lord Dudley Gordon, 1
Institute of Marine Engineers, Annual Meeting, 187
Institute of Metals, May Lecture, F. Simon, 345
Institution of Automobile Engineers, Automobile Research, W. A. Tookey and E. Giffen, 361
Institution of Chemical Engineers, Luncheon, 235
Institution of Electrical Engineers, Kennedy and Faraday Medal Awards, 313
Institution of Engineers-in-Charge, Dinner, 313
Institution of Mechanical Engineers, Watt Medal Award, 73; Munitions Labour Supply Organisations, 203; Benevolent Fund, 203; Mechanical Mishaps, G. E. Windeler, 283
Institution of Naval Architects, Annual Meeting, 219
Institution of Structural Engineers, Strength of Steel-framed Buildings, 345
Iron and Steel Institute, Luncheon, 297

K

KAYE, G. W. C., Obituary, 267

L

LABOUR, Ministry of, New Appointments, 377
Labour Problems, Wartime, 219
Labour in Shipyards, 155
London Chamber of Commerce, Presidential Address, Sir G. O. Clarke, 345
London County Council, Town Planning and Post-war Reconstruction, 409
London, The Replanning of, L.C.C. Report, 235
L.M.S. Railway, Gretna Junction Accident, 73; Annual Meeting, 171; Sir T. Royden Appointed Chairman and R. A. Burrows Deputy Chairman, 283
L.N.E. Railway, Great North of England Line Centenary, 21; Collision Near Brentwood, 107; Annual Meeting, 171; E. Thompson Appointed C.M.E. and W. H. Richards Chief Electrical Engineer, 283; Reorganisation of C.M.E.'s Department, 377

M

"MALAYA," H.M. Battleship, Repair of, 267
Man Power, Trades Union Congress and, 89
Manchester Ship Canal Company, 155
Manchester's Road Problems, 155
Mauldin, Lieut.-Col. H. H., Obituary, 361
Mechanical Mishaps, G. E. Windeler (I. Mech. E.), 283
Merchant Navy at War, R. H. Cross, 89
Merchant Shipbuilding in the British Empire, 283
Merchant Shipping Losses, 313, 361, 409
Merchant Ships, The Replacement of, Sir P. Haldin, 219
Ministry of Labour, New Appointments, 377
Ministry of Shipping and Transport, 297
Ministry of Supply, Timber Supplies, 73
Ministry of War Transport, 313
Ministry of Works and Buildings, 123, 155
Motor Transport, Maintenance of, Committee, 139
Munitions Labour Supply Organisation, W. H. Denholm (I. Mech. E.), 203

N

NATIONAL Expenditure, Select Committee on (Delay in Building Aerodromes), 219; Fourteenth Report, 345
National Institute of Industrial Psychology, Training Industrial Workers, 107
Naval Construction, 171, 329
Naval Corvettes, 21
Naval Losses Around Crete, 361
Naval Shipbuilding on the Great Lakes, 203
Night Bomber and Fighter Losses, Enemy, 313
Night Bombers, Detection of, 329
North America, British Supply Council, 41
"North Carolina," American Battleship, 251
Northern Ireland, Nucleus Industries in, 203
Norton Fitzwarren Accident, G.W.R., 1

O

OWEN, Sir David, The Late, 329

P

PETROLEUM (No. 1) Order, 1941, 297
Physical Society, Duddell and Chree Medals, 1
Pooling of Freight Rolling Stock, 187
Port of London Authority, Lord Ritchie's Retirement, 235
Prices, Control of, 377
Producer Gas for Road Transport Vehicles, 123
Production and Import Executives, 21

Q

"QUEEN ELIZABETH," Cunard White Star Liner, at Cape Town, 21

R

RADIO Location, 393
Railway Accidents in 1940, 393
Railway Wages, 107, 329
Railways, Criticism of the, Lord Stamp, 171
Railways, Government Control of, Sir R. Matthews, 171
Railways and the War, 1
"Rajputana," H.M. Armed Merchant Cruiser, Loss of, 283
Reconstruction, Preparatory Work for, Committee, 89
Registration of Building Firms, 409
Richards, W. H., Appointed Chief Electrical Engineer, L.N.E.R., 283

Road Transport (Defence) Advisory Committee, 41
Road Transport Scheme, New, 73
Roads, War Damage to, 89
Royal Air Force Strength, 171
Royalties on German Patents, 267
Royden, Sir T., Appointed Chairman, L.M.S., 283

S

SAFETY and Welfare in Works Construction, Order, 89
St. Lawrence River Power Scheme, 203
Salvage Returns, 267
Samuelson, Mr. F., Retirement, 345
"Scharnhorst" and "Gneisenau," German Battleships, Bombed at Brest, 235
Scientific Workers, Association of, Annual Council Meeting, 361
Scottish Power Company, Annual Meeting, 187
Shelter, Deep, in London Tubes (Select Committee on National Expenditure), 345
Shelters, Indoor Anti-debris, 123, 235
Shipbuilding, Empire, 21
Shipbuilding Labour, Admiralty Control of, 171
Shipping, British, General Council of, 283
Shipping Losses, Mercantile, 313, 361, 409
Shipping at Ports, Speeding Up, 41
Ships, Britain's Need for, 57
Ships, Deeper Loading of, 297
Ships, Repair of, in U.S.A., 267
Shipyards, Labour in, 155
Society of British Aircraft Constructors, 187
"Sokol," Polish Submarine, 57
South American Standards Committee, 377
Southern Railway, Annual Meeting, 187
Steel-framed Buildings, Strength of, 345
Storage Space, Registration of, 313

T

TANKERS, Government to Requisition, 1
Tanks and Aeroplanes, American, 267
Technical Education, 409
Thompson, E., Appointed C.M.E., L.N.E. Railway, 283
Timber Supplies, 73
Tin Research Institute, 139
Tizard, Sir H., Appointed to Air Council, 377
Town Planning and Post-war Reconstruction, L.C.C. Report, 409
Trades Union Congress and Man Power, 89
Training Army Craftsmen, 297
Training (Auxiliary) in the Engineering Industry, 73
Training Industrial Workers, 107
Transport, The Future of, G. Mills, 155
Transport Officers to Assist Exporters, 283

V

"VOLTAIRE," Armed Merchant Cruiser, Loss of, 297

W

WAGE Changes During 1940, 107
Wages Claims, A.E.U., 21, 57
Wages, Railway, Award, 329
Wages and Welfare in Factories, 89
War Damage Commission, 219
War Risks Claims, Settlement of, 123
War Transport Council, 235
War Transport, Ministry of, 313
Wartime Building Regulations, 297
Wartime Labour Problems, 219
"Washington," American Battleship, 329
Water Power Schemes in the Highlands, 361, 409
Watt Medal Award, I. Mech. E., 73
Welfare and Safety in Works Construction, Order, 89
Whitehaven Colliery Explosion, 361
Williams, Sir Thomas, the late, 329
Women in Industry, Miss C. Haslett, 267
Works and Buildings, Ministry of, 123, 155
Works Construction Safety and Welfare in, 89
Works, Director of, Colonel C. L. Howard Humphreys Appointed, 1

The Metallurgist

Eight-Page Supplement, February, April, and June, 1941

FEBRUARY ISSUE (28.2.41)

Age-hardening, Structural Changes Accompanying
Flakes in Forgings
Grain Size, Effect of Rate of Heating on
Hydrogen Embrittlement of Copper
Scientific Method in Metallurgy

BOOKS AND PUBLICATIONS:
Chrome Ore and Chromium, R. Allen and G. E. Howling

APRIL ISSUE (25.4.41)

Melting by Electron Bombardment
Inverse Segregation
White Spots in Fractures and Transverse Fissures in Rails, H. O. Neill

BOOKS AND PUBLICATIONS:
Practical Microscopical Metallography, R. H. Greaves and H. Wrighton
Technology of Magnesium and its Alloys, A. Beck

JUNE ISSUE (27.6.41)

American Work on the Corrosion of Duralumin
Coefficients of Expansion
Elastic Modulus of Solid Solutions
Tensile Properties of Iron at Raised Temperatures

PRINTED IN GREAT BRITAIN FOR THE PROPRIETORS BY GEORGE REVEIRS, LIMITED, 10 AND 12, ROSEBERY AVENUE, LONDON, E.C. 1, AND PUBLISHED BY ARTHUR RONALD VAUGHAN AT THE ENGINEER OFFICE, 28, ESSEX STREET, STRAND, IN THE PARISH OF ST. CLEMENT DANES, IN THE COUNTY OF MIDDLESEX.—JULY, 1941